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## FIGURE 3697

GATGTTTCAGTCCTGGAAAGACAAGCATCATGCTCTGACCAGTGCCTTCAGGGCTGTGGACAACGACCCTGGGA  
TCATTGTCTGGAGAATAGAGAAAATGGAGCTGGCGCTGGTGCCTGTGAGCGCCACGGCAACTTCTATGAGGGGG  
ACTGCTACGTATCTCTCGACCCGGAGAGTGGCCAGTCTCCTATCCCAGGACATCCACTTCTGGATCGGGAAGG  
ACTCTCCCAGGATGAGCAAAGCTGCGCAGCCATATATACCACACAGCTGGACGACTACCTGGGAGGCAGCCCTG  
TGCAGCACCCGAGAGGTCCAGTACCATGAGTCAGACACTTTCCTGGCTACTTCAAGCAGGGCATCATCTACAAGC  
AGGGGGGTGTGCGCTCTGGGATGAAGCACGTGGAGACCAATACCTACGACGTGAAGCGGCTGCTACATGTGAAAG  
GGAAAAGAAACATCAGGGCTACCGAGGTGAAATGAGCTGGGACAGTTTCAACCGAGGTGATGTCTTCTTGCTGG  
ACCTTGGGAAAGTCATCATCCAATGGAATGGCCAGAGAGCAACAGTGGGGAGCGCCTGAAGGCTATGCTTCTGG  
CAAAGGATATTCGAGACAGGGAGCGAGGGGGCCGTGCTGAAATAGGAGTGATCGAGGGAGACAAGGAGGCAGCCA  
GCCCAGAGCTGATGAAGGTCTTCAGGACACCCCTGGCCGACGCTCCATTATCAAGCCTACAGTCCCTGATGAGA  
TCATAGATCAGAAGCAGAAATCAACTATCATGTTGTATCATATCTCAGATTGAGCTGGGCAGCTGGCAGTCACAG  
AGGTAGCAACAAGGCCTCTGGTCCAGGACTTACTGAACCATGATGACTGCTACATCCTGGACCAAAGTGAACCA  
AAATCTACGTGTGGAAAGGAAAAGGAGCCACAAAGGCTGAAAAACAGGCAGCCATGTCTAAAGCGCTGGGCTTCA  
TCAAGATGAAGAGCTACCCAGCAGCACCAATGTGGAGACCGTCAACGATGGTGTGAGTCGGCCATGTTCAAGC  
AGCTGTTCCAGAAGTGGTCAGTAAAGGACCAGACCATGGGCTGGGGAAAACGTTGAGCATTGGTAAAATTGCTA  
AAGTTTTCCAGGATAAATTTGATGTGACTCTGCTACACACCAAGCCAGAGGTAGCTGCCCAGGAAAGAATGGTCG  
ATGATGGCAACGGAAAAGTTGAGGTCTGGAGAATTGAGAACCTGGAGCTGGTCCCTGTGGAGTATCAATGGTATG  
GCTTCTTTTATGGGGGAGACTGTTATCTGGTCTCTACACATACGAGGTAAATGGGAAGCCACATCACATCTTGT  
ACATCTGGCAGGGCCGCCACGCCTCACAGGATGAGCTGGCAGCCTCAGCATACCAGGCAGTGGAGGTGGATCGGC  
AGTTTGATGGGGCTGCTGTGCAAGTTCGAGTCAGGATGGGAACGGAGCCACGCCACTTCATGGCCATCTTCAAAG  
GGAAGCTAGTTATCTTTGAGGGTGGGACTTCCAGGAAGGGAAATGCCGAGCCTGACCCTCCAGTAAGACTCTTCC  
AAATTCATGGAAATGACAAATCTAACACCAAAGCAGTGGAAAGTCCAGCCTTTGCCTCCTCCCTAAACTCCAATG  
ATGTCTTTCTGCTGCGAACTCAGGCAGAGCACTACCTGTGGTATGGCAAGGGGTCTAGTGGGGATGAGCGGGCAA  
TGGCTAAGGAGCTGGCCAGCCTTCTCTGTGATGGCAGCGAGAACACTGTGGCCGAGGGCCAGGAGCCAGCCGAGT  
TCTGGGACCTACTGGGAGGGGAAAATCCCTATGCCAATGATAAAAGACTTCAGCAGGAAATCCTAGATGTCCAGT  
CTCGTCTCTTTGAATGTTCCAATAAGACCGGCCAATTCGTTGTCTGAGATCACAGACTTCACCCAGGATGACC  
TGAACCCTACTGACGTGATGCTCCTAGATACCTGGGACCAGGTGTTCTGTGGATTGGGGCTGAGGCCAATGCCA  
CGGAGAAGGAGAGTGCCCTTGCCACAGCACAGCAGTACCTGCACACTACCCAGCGGCCGAGATCCCGACACAC  
CAATCCTGATCATTAAGCAGGGGTTTGAGCCTCCCATCTTCACAGGCTGGTTCCTAGCCTGGGACCCTAACATTT  
GGAGTGCAGGAAAAACATATGAACAATTAAGAAGAGCTGGGAGATGCTGCTGCTATCATGCGAATCACTGCTG  
ACATGAAGAATGCAACCCTCTCCCTGAATTCTAATGACAGTGAGCCAAAATATTACCCTATAGCAGTTCTGTGA  
AAAACCAGAATCAGGAGCTGCCTGAGGATGTAAACCCTGCCAAAAGGAGAATTACCTCTGGAACAGGACTTGG  
TGTCTGTGTTTGGCATCACAAGAGGGCAATTTGCAGCTCTGCCTGGCTGGAAACAGCTCCAATGAAGAAAGAAA  
AGGGGCTTTTCTAAAGCAAGAAGGCCTATACCTATTGCAAGGCCACAGAAAAGAGCAGATAGTGCCAATATCAGG  
AAATAATTTATCCACCAATTTCTGCCTGACATTGAGTACTTAATTTAGATATAATAGAGTCTGCAAATCACGGC  
ATGTTCTCCATTTTTCTCATCTTGCATTCTTGCTGTTATATACCTAAAATGTTAACCATATAGTTTTTGGG  
TTTTGTGGCCC

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**FIGURE 3698**

MPLTSAFRAVDNDPGIIVWRIEKMELALVPVSAHGNYEGDCYVILSTRRVASLLSQDIHFWIGKDSSQDEQSCA  
AIYTTQLDDYLGGSPVQHREVQYHESDTFRGYFKQGIYKQGGVASGMKHVETNTYDVKRLHVKGRNIRATEV  
EMSWDSFNRGDVFLLDLGKVIIQWNGPESNSGERLKAMLLAKDIRDREGRGAEIGVIEGDKEAASPELMKVLQD  
TLGRRSIIKPTVPDEIIDQKQKSTIMLYHISDSAGQLAVTEVATRPLVQDLLNHDDCYILDQSGTKIYVWKGKGA  
TKAEKQAAMSKALGFIKMSYPSSTNVETVNDGAESAMFKQLFQKWSVKDQTMGLGKTFSIGKIAKVFQDKFDVT  
LLHTKPEVAAQERMVDDGNGKVEVWRIENLELVPVEYQWYGGFFYGDCYLVLYTYEVNGKPHHILYIWQGRHASQ  
DELAASAYQAVEVDRQFDGAAVQVRVRMGTEPRHFMAIFKGLVIFEGGTSRKGNAEPDPPVRLFQIHGNDKSNT  
KAVEVPAFASSLNSNDVFLRLTQAEHYLWYGKSSGDERAMAKELASLLCDGSENTVAEGQEPAEFWDLLGGKTP  
YANDKRLQQEILDVQSRLFEC SNKTGQFVVEITDFTQDDLNP TDVMLLDITWDQVFLWIGAEANATEKESALATA  
QQYLHTHPSGRDPDTPILIIKQGFEPPIFTGWFLAWDPNIWSAGKTYEQLKEELGDAAAIMRITADMKNATLSLN  
SNDSEPKYYP IAVLLKNQNQELPEDVNP AKKENYLSEQDFVSFVGITRGQFAALPGWKQLQMKKEKGLF

**FIGURE 3699A**

[illegible]

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**FIGURE 3699B**

ATAAAATGGAAGCAATTGCTCATGTTGGCCAAACATGGTGCACCGAGTGATTCCATCTCTGGTAAAGTTACACT  
TTTATTTCTGTATGTTGTACAATCAAAACACACTACTACCTCTTAAGTCCCAGTATAACCTCATTTTTCATACTG  
AAAAAAAAAGCTTGTGGCCAATGGAACAGTAAGAACATCATAAAATTTTATATATATAGTTTATTTTGTGGGA  
GATAAATTTTATAGGACTGTTCTTTGCTGTTGTTGGTCGCAGCTACATAAGACTGGACATTTAACTTTTCTACCA  
TTTCTGCAAGTTAGGTATGTTTGCAGGAGAAAAGTATCAAGACGTTTAACTGCAGTTGACTTTCTCCCTGTTCTT  
TTGAGTGTCTTCTAACTTTATTCTTTGTTCTTTATGTAGAATTGCTGTCTATGATTGTACTTTGAATCGCTTGCT  
TGTTGAAAATATTTCTCTAGTGTATTATCACGTCTGTTCTGCACAATAAACATAACAGCCTCTGTGA





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**FIGURE 3701**

MVFRREFVEVGRVAYVSFGPHAGKLVAIVDVIDQNRALVDGPCTQVRRQAMPFKCMLTDFILKFPHSARQKYVQQ  
AWQKADINTKWAATRWAKKIEARERKAKMTDFDRFKVMKAKKTRNRIKNEVKKLQKAALLKASPKKAPGTKGTA  
AAAAAAAAAKVPAKKMTAASKKASAQKVPAQKATGQKAAPAPKAQKGQKAPAQKAPAPKASGKKA

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**FIGURE 3702**

GAACGCCTCTGTGTTTGAACAAACATTCGAGTGGTAGGAGGACTCCTGTCTGCTCATCTGCTCTCCAAGAAGGC  
TGGGGTGGGAAGTAGAGGCTGGATGGCCCTGTTCCGGGCCTCTCCTGAGAAATGGCTGAGGAGGCGGCCCCGAAAAC  
CCTCCCAGCCTTTTCAGACCCCCACTGGCATGCCATATGGAACAGTGAACCTTACTTCATGGCGTGAACCCAGGAGA  
GACCCCTGTCACCTGTACGGCAGGGATTGGGACCTTCATTGTTGAATTTGCCACCCTGAGCAGCCTCACTGGTGA  
CCCGGTGTTTGAAGATGTGGCCAGAGTGGCTTTGATGCGCCTCTGGGAGAGCCGGTCAGATATCGGGCTGAGTAT  
AACAAAGCCATCCGGAACCTACACCCGCTTCGATGACTGGTACCTGTGGGTTTCAGATGTACAAGGGGACTGTGTCC  
ATGCCAGTCTTCCAGTCCTTGGAGGCCTACTGGCCTGGTCTTCAGAGCCTCATTGGAGACATTGACAATGCCATG  
AGGACCTTCCTCAACTACTACACTGTATGGAAGCAGTTTGGGGGGCTCCCGGAATTCTACAACATTCCTCAGGGA  
TACACAGTGGAGAAGCGAGAGGGCTACCCACTTCGGCCAGAATTATTGAAAGCGCAATGTACCTCTACCGTGCC  
ACGGGGGATCCCACCCTCCTAGAACTCGGAAGAGATGCTGTGGAATCCATTGAAAAGCTGGACAACCGCATGGAG  
TCGTTCTTCCTGGCCGAGACTGTGAAATACCTCTACCTCCTGTTTGACCCAACCAACTTCATCCACAACAATGGG  
TCCACCTTCGACGCGGTGATCACCCCTATGGGGAGTGCATCCTGGG

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**FIGURE 3703**

MAEEAARKLLPAFQTPTGMPYGTVNLLHGVNPGETPVTCTAGIGTFIVEFATLSSLTGDPVFEDVARVALMRLWE  
SRSDIGLSITKPSGTTPASMTGTCGFRCTRGLCPCQSSSPWRPTGLVFRASLETLTMP

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**FIGURE 3704**

CAAATTTTATCAAAGTTAATGGATCAGTTAGAAGCTCTAAAGAAGCAGTTGGGTGATAATGAAGCTATTACTCA  
AGAAATAGTGGGCTGTGCCCATTTGGAGAATTATGCTTTGAAAATGTTTTGTATGCAGACAAATGAAGATCGTGC  
TGGACGATTTTCAAAAAACATGATCAAGTCCTTCTATACTGCAAGTCTTTTGATAGATGTCATAACAGTATTTGG  
AGAACTCACTGATGAAAAATGTGAAACACAGGAAGTATGCCAGATGGAAGGCAACATACATCCATAATTGTTTAAA  
GAATGGGGAGACTCCTCAAGCAGGCCCTGTTGGAATTGAAGAAGATAATGATATTGAAGAAAAATGAAGATGCTGG  
AGCAGCCTCTCTGCCCACTCAGCCAACTCAGCCATCATCATCTTCAACTTATGACCCAAGCAACATGCCATCAGG  
CAACTATACTGGAATACAGATTCTCCGGGTGCACACGCTCCAGCTAATACACCAGCAGAAGTGCCTCACAGCAC  
AGGTGTAGCAAGTAATACTATCCAACCTACTCCACAGACTATACCTGCCATTGATCCCGCACTTTTCAATACAAT  
TTCCAGGGGGATGTTTCGTCTAACCCCAAGACTTTTGCTAGAGCTCAGAAGTACTGCAAATATGCTGGCAGTGC  
TTTGCAGTATGAAGATGTAAGCACTGCTGTCCAGAATCTACAAAAGGCTCTCAAGTTACTGACGACAGGCAGAGA  
ATGAAGCCTTTGTATGACAGACCCATGTATTTTTGGCATGAGGAACCTAACAGTCCATTACTCTATCTTCAGCCTA  
TCAGGATCACATTTTCATTGTCCATTTACTAGATTCAATCGTCTCTGAGTATATAGGGCTGATGTTAGCAAGACC  
CTAAAAATGTCCATTGAACCCCTGCTTCAAAAAATGAAAACACACCTCTATAAAATGTGTACTGGGAATAAGCTTT  
GTATTTACATACATTAGGGGAATTTTTTAAAAATCTGTAATGTTTGGACAAACAGATGATATTACTTTGCTATAAA  
ATTATAAATGTAACTTTTAATAAAGATAGCCAGAATATTCTAAATTAGAAATTACGTTTTTGTTCCTCAAGAC  
ATAAAACAAATATAAACATTCTAAACTGCTGGATGAATCTGAAAAGACATTAAGTTCAAATTTAATTTATTCTC  
ATATTAAATATAACTCCATTAAAAGTTTAAAAATTCATGGGAGAAAATATAATAAGGTAAAGAGGTAGAATCACT  
TTCAGACTTAAGAATAATGTTGATTTCCCAAGTGCTTTACCTTATCTGTTAAAGCGTAAGATGAATTGGTATTTG  
CTTCATAGGCAGTTTGACTGCATGTATTAGAGAATGAAAAGAAGATATTTGTAGTAATGCCTGGAAACTTGGTGC  
TTTAAATTAAGGTACTCCTCTGCTGCTGTAGAATGGATTCCACACAGTGGATAGCTATGGGTGATTGAGAATATT  
ATGTTTAGATTCCCATTTGTTAAGTTTATAAGTTTTGTGGGGAATTATGAACCTTACTGTGTACTACCTGCATTTG  
TGCTGTGTGAAAAATAAATACAAGGATTCGTTTAGCTAA

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**FIGURE 3705**

GTGAGCGCCGGGCTCGGGGCCCCCGGCCGCCAGCCCTTCCCTTCCCTCCATCCCATCCCCTCCCCTCCCCC  
CGGGCCCCGCGCCCCCCCCGCCCCCCCCCATGGACATGCTGGACCCGGGTCTGGATCCCCTGCCTCGGC  
CACCGCTGCTGCCGCCAGCCACGACAAGGGACCCGAGGCGGAGGAGGGCGTCGAGCTGCAGGAAGCGGGGA  
CGGCCAGGAGCGGAGGAGCAGACAGCGGTGGCCATCACCAGCGTCCAGCAGGCGGCGTTCGGCGACCACAACAT  
CCAGTACCAGTTCCGCACAGAGACAAATGGAGGACAGGCTGTGATCCAAAATCCCTTCAGCAATGGTGGCAGTCC  
GGCGGCCGAGGCTGTGAGCGGGGAGGCACGATTTGCCATTTCCAGCGTCCAGTGTGGGAGATACTACGGCTGT  
GTCCGTACAGACCACAGACCAGAGCTTGAGGCTGGAGGCCAGTTCTACGTCATGATGACGCCCCAGGATGTGCT  
TCAGACAGGAACACAGAGGACGATCGCCCCCGGACACACCCCTTACTCTCCAAAAATTGATGGAACCAGAACACC  
CCGAGATGAGAGGAGAAGAGCCCAGCACAAACGAAGTGGAGCGGAGGCGGAGGGACAAGATCAACAACCTGGATCGT  
CCAGCTTTCGAAAATCATTCAGACTGTAAACGACAGACAACAGCAAGACGGGAGCGAGTAAAGGAGGGATCCTGTC  
CAAGGCTGCGATTACATCCGGGAGTTGCGCCAGACCAACCAGCGCATGCAGGAGACCTTCAAAGAGGCCGAGCG  
GCTGCAGATGGACAACGAGCTCCTGAGGCAGCAGATCGAGGAGCTGAAGAATGAGAACGCCCTGCTTCGAGCCCA  
GCTGCAGCAGCACAACTGGAGATGGTGGGCGAGGGCACCCGGCAGTGACGCCCCGCCACCACGCAGCCGCCG  
CCGCCCACGCCGGCTCTGCTGCCCCCTTCCCCAGCCCTTAGCACAGAGAGGGACACATGCCCTCCCCAGCTG  
CGTTTTTTTATAGTAGATTTTAAACAAAAACGGGGAGAAATAATGCATTTCTGTGGATACAGTGCCACCGCCC  
TCCTCCACTTGAAACGGTATCCTCCCTGCCCATCCGTCTGTCTGTGCGCCCTTCTCCCGGCCCTACTAAGCCCC  
GGCACTTCTAGTGGTCTCACCTGGAGGCAAGAGGGAGGGGACAGAGGCCCTGCCACGTCCCGCTGCCTCCTGCTC  
TCTGGAGGTACTGAGACAGGTGCTGATGGGAAGGAGGGGAGCCTTTGGGGGGCCACCCGGGGCTGGACCTATG  
CAGGGAGGCCACGTCCCACCCACCTCTTGTCTTGGGTCCCTGCTCCCTTTGGGGGTGTGTGTGTGTGTTTTA  
ATTTTCTTTATGAAAAATTGAC

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**FIGURE 3706**

MDMLDPGLDPAASATAAAAAASHDKGPEAEEGVLEGGDGPAAEQTAVAITSVQQAAGDHNIIQYQFRTEETNGG  
QAVIQNPFSNGGSPAEEAVSGEARFAYFPASSVGDTTAVSVQTTDQSLQAGGQFYVMMTPQDVLQTGTQRTIAPR  
THPYSPKIDGTRTPRDERRRRAQHNEVERRRRDKINNWIQVLSKIIPDCNADNSKTGASKGGILSKACDYIRELRQ  
TNQRMQETFKEAERLQMDNELLRQIEELKNENALLRAQLQHNLEMVGEETRQ

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**FIGURE 3707**

CGATTGTTGGTGACAGCGAAAGAACGATAACAAAAATGCCGGAGCGAGATAGTGAGCCGTTCTCCAACCCTTTGGC  
CCCCGATGGCCACGATGTGGATGATCCTCACTCCTTCCACCAATCAAACTCACCATGAAGACTTCAGGAACT  
TCTCATGACCCCCAGGGCTGCACCTACCTCTGCACCACCTTCTAAGTCACGTCACCATGAGATGCCAAGGGAGTA  
CAATGAGGATGAAGACCCAGCTGCACGAAGGAGGAAAAAGAAAAGTTATTATGCCAAGCTACGCCAACAAAGAAAT  
TGAGAGAGAGAGAGAGCTAGCAGAGAAGTACCGGGATCGTGCCAAGGAACGGAGAGATGGAGTGAACAAAGATTA  
TGAAGAAACCGAGCTTATCAGCACCACAGCTAACTATAGGGCTGTTGGCCCCACTGCTGAGGCGGACAAATCAGC  
TGCAGAGAAGAGAAGACAGTTGATCCAGGAGTCCAAATTCCTGGGTGGTGACATGGAACACACCCATTTGGTGAA  
AGGCTTGGAATTTTGCTCTGCTTCAAAAGGTACGAGCTGAGATTGCCAGCAAAGAGAAAGAGGAAGAGGAACTGAT  
GGAAAAGCCCCAGAAAGAAACCAAGAAAGATGAGGATCCTGAAAAATAAAATTGAATTTAAACACGCTCTGGGCCG  
CAATGTTTTACCGAATGCTTTTTAAGAGCAAAGCATATGAGCGGAATGAGTTGTTCTGCCGGGCGCATGGCTAG  
TGTGGTAGACCTGGATGATGAGTATGCTGACACAGATATCCCCACCACTCTTATCCGCAGCAAGGCTGATTGCCC  
CACCATGGAGGGCCAGACCACACTGACCACAAATGACATTGTCTATTAGCAAGCTGACCCAGATCCTTTCATACCT  
GAGGCAGGGAACCCGTAACAAGAAGCTTAAGAAGAAGGATAAAGGGGAAGCTGGAAGAGAAGAAACCTCCTGAGGC  
TGACATGAATATTTTTGAAGACATTGGGGATTACGTACCCTCCACAACCAAGACACCTCGGGACAAGGAGCGGGA  
GAGATATCGGGAACGGGAGCGTGATCGGGAAAGAGACAGAGACCGTGACCGAGAGCGAGAGCGAGAACGAGATCG  
GGAACGAGAGCGAGAGCGGGACCGAGAGAGAGAAGAGGAAAAGAAGAGACACAGCTACTTTGAGAAGCCAAAAGT  
AGATGATGAGCCCATGGACGTTGACAAAGGACCTGGGTCTACCAAGGAGTTGATCAAGTCCATCAATGAAAAGTT  
TGCTGGGTCTGCTGGCTGGGAAGGCACAGAATCGCTGAAGAAGCCAGAAGACAAAAGCAGCTGGGAGATTTCTT  
TGGCATGTCCAACAGTTATGCAGAGTGCTACCCAGCCACGATGGATGACATGGCTGTGGATAGTGATGAGGAGGT  
GGATTATAGCAAAATGGACCAGGGTAACAAGAAGGGGCCCTTAGGCCGTTGGGACTTTGATACCCAGGAAGAATA  
CAGCGAGTATATGAACAACAAAGAAGCTTTGCCCAAGGCTGCATTCCAGTATGGTATCAAAATGTCTGAAGGGCG  
GAAAACCAGGCGCTTCAAGGAAACCAATGACAAAGCAGAGCTTGATCGCCAGTGGAAGAAGATTAGTGCAATCAT  
TGAGAAGAGGAAGAAGATGGAAGCTGATGGGGTTGAAGTCAAAAGACCAAAATACTAATCACTAGTTACAACCAG  
AGATGCTCCACAAGGATATGCTCCCCACTGTTTTCTTTCTACAATTTCAAAGGTTGCAAGATGTTTTTTTGTGG  
ATGAATATAAAATTTTATTGTGTAATTACTTGGTTCCATTAAAATTGGTTAACTTGC



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**FIGURE 3708**

GCTGGATGGGGAGAGCTGTATGGACGCTCAGGCTACAACTATTTTTCTCAGGGGGTGCAGATGATGCCTGGGCA  
GATGTGGAGGACGTACGGAGGAGGACTGTGCTCTTCGAAGTGGTGACACGCATCTTTTGATAAGGTCAGAGGC  
TATGACATCAAGCTGCTTCGATACCTGTGAGTCAAATACATCTGTGACCTGATGGTGGAGAACAAGAAGGTGAAG  
TTTGGCATGAATGTAACTCCTCTGAGAAGGTGGACAAAGCCCAGCGCTATGCCGACTTCACTCTCCTCTCCATC  
CCGTATCCAGGCTGTGAATTTTCAAGGAATATAAAGATCGGGATTACATGGCAGAAGGGCTCATATTTAACTGG  
AAGCAGGACTACGTTGATGCCCCATTGAGCATCCCCGACTTCCTGACTCACTCTCTGAACATTGACTGGAGCCAG  
TATCAGTGTGGGATCTGGTGCAACAAACACAAAACCTACCTGAAGCTGCTGCTTTCCTTAGTTAACAGTGATGAT  
GACAGCGGGCTGCTGGTACACTGTATCTCAGGCTGGGATCGGACCCCCCTCTTCATCTCCCTCCTGCGCCTTCC  
TTGTGGGCTGATGGGCTCATCCACACGTCCCTGAAGCCCACTGAGATCCTCTACCTCACTGTGGCCTATGACTGG  
TTCCTCTTCGGGCACATGTTGGTAGATCGGCTCAGCAAAGGGGAGGAGATTTCTTCTTCTGCTTCAATTTTTG  
AAGCATATTACCTCCGAGGAGTTCTCTGCTCTGAAGACCCAGAGGAGGAAGAGTTTGCCAGCCCGGATGGAGGC  
TTCACCCTGGAAGACATCTGCATGCTGAGACGAAAGGACCGTGGCAGCACCAACAGCCTTGGCAGCGACTTCTCC  
CTGGTCATGGAGAGTTCCCCAGGAGCCACTGGGAGCTTACCTATGAGGCCGTGGAGCTGGTCCCAGCAGGAGCG  
CCAACTCAGGCAGCTTGGCTTGCAGCCCTGAGTGATCGAGAGACTCGCTGCAGGAGGTGCGCTCAGCCTTCTTGG  
CTGCGTACAGCAGCACAGTGGGGCTTCGGGCAGTAGCCCCCAGTCCTTCCGGTGCCATCGGGGGCCTGCTGGAGC  
AATTGCCCCGTGGTGTGGACTCCGAGCATCAGCAGCAATGCCTTGTGAAGAAGCCAGCCCATGACATTTTCT  
GCTCCTCTCTCAGCTGAGCCCTTAGCAGAGAATCAAAGCCATGCCTGGCCGAAGGGGTACTTCCAGGTCAGGGGA  
AATTTCAGTCCCCCATCTCCATCATGAACATGGCAGCCCCAAAGCTGAGCAAGGCCAAAGACAGGGTTTTCCAAC  
CCCCAGCCTCTTGACTGGTGACCACCACCCCTTCTTGTCACTGTCTCCACCCACCCCATCTTTGCTGGGATTCC  
CATCAACTCTCAGAACTGTGTGGGGTTTCCCTGGGGCCTTGTGGAAGCCATGACTTCACAAAGACCCTACCTGTC  
AGTTCTTGTTTCTGGGGAGGAGGGATCACCTGCACTGAGAATGAGGCAGTTTGACACAGATCACAAAATAAAATC  
AAAGTCTTTTTG

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**FIGURE 3709**

MVENKKVKFGMNVTSSEKVDKAQRYADFTLLSIPYPGCEFFKEYKDRDYMAEGLIFNWKQDYVDAPLSIPDFLTH  
SLNIDWSQYQCWDLVQQTQNYLKLLLSLVNSDDDSGLLVHCISGWDRTPLFISLLRLSLWADGLIHTSLKPTEIL  
YLTVAIDWFLFGHMLVDRLSKGEEIFFCFNFLKHITSEEFSAKLTQRRKSLPARDGGFTLEDICMLRRKDRGST  
TSLGSDFSLVMESSPGATGSFTYEAVELVPAGAPTQAAWLAALSDRETRCRRCAQPSWLRTAAQWGFQ

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**FIGURE 3710**

ACGAGAAGTAGTCGTTTATGCTCCACTTTCAAAGAAGCAGGAGATCTTTTATACAGCCATTGTGAACCGTACAAT  
TGCAAACATGTTTGGATCCAGTGAGAAAGAAACAATTGAGTTAAGTCCTACTGGTCGACCAAAACGACGAAGTAG  
AAAATCAATAAATTACAGCAAAATAGATGATTCCCTAATGAATTGGAAAACTGATCAGTCAAATACAGCCAGA  
GGTGGACCGAGAAAGAGCTGTTGTGGAAGTGAATATCCCTGTAGAATCTGAAGTTAATCTGAAGCTGCAGAATAT  
AATGATGCTACTTCGTAAATGTTGTAATCATCCATATTTGATTGAATATCCTATAGACCCTGTTACACAAGAATT  
TAAGATCGATGAAGAATTGGTAACAAATTCGGGAAGTTCTTGATTTTGGATCGAATGCTGCCAGAACTAAAAAA  
AAGAGGTCACAAGGTGCTGCTTTTTTCACAAATGACAAGCATGTTGGACATTTTGATGGATTACTGCCATCTCAG  
AGATTTCAACTTCAGCAGGCTTGATGGGTCCATGTCTTACTCAGAGAGAGAAAAAACATGCACAGCTTCAACAC  
GGATCCAGAGGTGTTTATCTTCTTAGTGAGTACACGAGCTGGTGGCCTGGGCATTAATCTGACTGCAGCAGATAC  
AGTTATCATTTATGATAGTGATGGAAACCCCACTCGGATCTTCAGGCCCAGGATAGATGTCATAGAATTGGTCA  
GACAAAGCCAGTTGTTGTTTATCGCCTTGTTACAGCAAATACTATCGATCAGAAAATTGTGGAAAGAGCAGCTGC  
TAAAAGGAACTGGAAAAGTTGATCATCCATAAAAATCATTTCAAAGGTGGTCAGTCTGGATTAAATCTGTCTAA  
GAATTTCTTAGATCCTAAGGAATTAATGGAATTATTAAAATCTAGAGATTATGAAAGGGAAATAAAAGGATCAAG  
AGAGAAGGTCATTAGTGATAAAGATCTAGAGTTGTTGTTAGATCGAAGTGATCTTATTGATCAAATGAATGCTTC  
AGGACCAATTAAAGAGAAGATGGGGATATTCAAGATATTAGAAAATTCTGAAGATTCCAGTCCTGAATGTTTGT  
TTAAAGTGGAGCTCAAGAATAGCTTTTAAAAGTTCTTATTTACATCTAGTGATTTCCCTGTATTGGGTTTGAAAT  
ACTGATTGTCCACTTCACCTTTTTTATTATATCAGTTGACATGTAAC TAGTACCATGCGTACTTAAATAGATGGT  
AATTTTCTGAGCCTTACCAAGAACAAAGAAGTATCCATATTAAGTTTAGATTTTCAGTTAATTTTGGAGACTGAG  
TAGTATTCTTGATACAGGCTGATGTGTACTTAACCACTTCAGATTTATACAGTCTTCCTGTGGAAGTTTAGTA  
AATGTCTTTTCCCTCCTTTCTTCTAGTAATGCAGTTCATGGGCTTTAGGTACTTCAGTTATGAAGTAGGCTTT  
CATGGGGAGAGATTGGGATTATGCTCTCTGTTGTTTAAAGAACTGTTTGATTTTAGAGTCTATTTCTATGAGATA  
GTTTACCAATAAATGTTTCTTATAAG

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**FIGURE 3711**

MFGSSEKETIELSPTGRPKRRTRKSINYSKIDDFPNELEKLISQIQPEVDREAVVEVNIPVESEVNLKLQNIMM  
LLRKCCNHPYLIIEYPIDPVTQEFKIDEELVTNSGKFLILDRMLPELKKRGHKVLLFSQMTSMLDILMDYCHLRDF  
NFSRLDGSMYSEREKNMHSFNTDPEVFIFLVSTRAGGLGINLTAADTVIIYSDWNPQSDLQAQDRCHRIGQTK  
PVVVYRLVTANTIDQKIVERAAAKRKLEKLIHKNHFKGGQSGNLNSKNFLDPKELMELLKSRDYEREIKGSREK  
VISDKDLELLLDLDRSDLIDQMNASGPIKEKMGIFKILENSEDSSPECLF

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**FIGURE 3712**

ACTTCCGGTTCGGCGTGAGCGTGAGGTGTGGGTGTTTCGTTTCTCAGGTAAAACATGGCTAAAAGCTTACGGAGTAA  
GTGGAAAAGAAAGATGCGTGCTGAAAAGAGAAAAAGAATGCCCAAAGGAGGCCAGCAGGCTTAAAAGTATTCT  
CAAAC TAGACGGTGATGTTTTAATGAAAGATGTTCAAGAGATAGCAACTGTGGTGGTACCCAAACCCAAACATTG  
CCAAGAGAAAATGCAATGTGAGGTAAAAGATGAAAAGATGACATGAAAATGGAGACTGATATTAAGAGAAACAA  
AAAGACTCTTCTAGACCAGCATGGACAGTACCCAATATGGATGAACCAAAGGCAAAGAAAAAGGCTGAAGGCAA  
GCGAGAGAAAAGAAAGGGGAAAAGCAAAGCAAAGCAGTGAAAGTGGCAAAGGGTTTGGCCTGGTAGACTCTTAA  
AACCTTGGAAAATGCCACATGGGATAGATGACGGATTAGAATGTATACACATGTATACTTTGATTCAACTGCCA  
CCAAATGAAAACCATTTGTTTTCTATTTTAACTTGGCCTTTTTTCTTCAATTCAAACCCAGCATAACTCCTCAA  
GTTTGTGTTTGGGAACCTGAATAAAATATTTTCTTTGATACATCCAAGCTCTACTGATACTTTAACTGGATGCTAC  
CCAATATCCAGTTATAATCAGGCCTCAACGTTCTGTCAGGTATTAATATGGTTAGAATTGTTCTTACAACTGGTA  
ATTATAGTCAATAGAGATAAAACAGATGATGTACTGACAAATTTTGTGAACTTAGATTTTAAAGAAAGTTGTTG  
TATAATCATATCATTTAAAAATACTACATTAGGGCTGGGCATGGTGGCTCACACCTGTAATCCCAGCACTTTGGG  
AGGCCGAGGCAGGTGGATCACGAGGTCAGTTCGAGACTAGCCTGGCTAATACAGTGAAACCCCATCTCTACTAAA  
AATACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3713**

MAKSLRSKWKRKMRAEKRKKNAPKEASRLKSILKLDGDVLMKDVQEIATVVVPKPKHCQEKMQCEVKDEKDDMKM  
ETDIKRNKKTLLDQHGQYP IWMNQRQRKRLKAKREKRKGKSKAKAVKVAKGLAW

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**FIGURE 3714A**

GGGAGCGAGTGCGGAGCGAGTGGGAGCGAGACGGCCCTGAGTGGAAGTGTCTGGCTCCCCGTAGAGGCCCTTCTG  
TACGCCCCGCGCCCATGAGCTCGTTCTACGCGAACAGCGCCGTCGTTAGGCTGGCTCTGTAGCCTCGGCCTTAC  
CCCGGGACAGGCCACGCCTCGCCAGGGAGGGGGCAGCCCGTCGAGGCGCCTCCCTAGTCAGCGTCGGCGTCGGC  
CTGCGACCCTGGAAGCGGGAGCCGCCGAGCGAGAGGAGGAGCTCCAGTGGCGGGCGGGCGGCGGCGAGCGGA  
GCGGGCAGCAGCTCCAGCAGCGCCAGCAGGCGGGATCGAGGCCGTCAACATGGCGAGCGCCTCGTACCACATTTT  
CAATTTGCTGGAATAATGACATCCAGCGACAAGGACTTTAGGTTTATGGCTACAAATGATTTGATGACGGAAT  
GCAGAAAGATTCCATCAAGTTGGATGATGATAGTGAAAGGAAAGTAGTGAAATGATTTTGAAGTTATTGGAAGA  
TAAAAATGGAGAGGTACAGAATTTAGCTGTCAAATGTCTTGGTCCTTTAGTGAGTAAAGTGAAGAATACCAAGT  
AGAGACAATTGTAGATACCCCTCTGCACTAACATGCTTTCTGATAAAGAACAACTTCGAGACATTTCAAGTATTGG  
TCTTAAACAGTAATTGGAGAACTTCCTCCAGCTTCCAGTGGCTCTGCACTAGCTGCTAATGTATGTAAGAAAGAT  
TACTGGACGCTTTACAAGTGCAATAGCAAAACAGGAAGATGTCTGTTCAGCTAGAAGCCTTGGATATTATGGC  
TGATATGTTGAGCAGGCAAGGAGGACTTCTGTAAATTTCCATCCTTCAATTTGACCTGTCTACTTCCCCAGTT  
GACCAGCCCTAGACTTGCAGTGAGGAAAAGAACATTATCGCTCTTGGCCATCTGGTTATGAGCTGTGGAATAAT  
AGTTTTGTAGATCTTATTGAACATCTGTTGTCAGAGTTGTCCAAAAATGATTCTATGTCAACAACAAGAACCTA  
CATACAATGTATTGCTGCTATTAGTAGGCAAGCTGGTCATAGAATAGGTGAATACCTTGAGAAGATAATTCCCTT  
GGTGGTAAAAATTTGCAATGTAGATGATGATGAATTAAGAGAGTACTGTATTCAAGCCTTTGAATCATTTGTAAG  
AAGATGTCTAAGGAAGTATATCCTCATGTTTCTACCATTTATAAATATTTGTCTTAAATATCTTACCTATGATCC  
AAATTATAATTACGATGATGAAGATGAAGATGAAAATGCAATGGATGCTGATGGTGGTGGTATGATGATCAAGG  
GAGTGATGATGAATACAGTGATGATGATGACATGAGTTGGAAGTGAGACGTGCAGCTGCGAAGTGCTTGGATGC  
TGATGTTAGCACAAGGCATGAAATGCTTCCAGAATTTACAAGACCGTCTCTCCTGCACTAATATCCAGATTTAA  
AGAGCGTGAAGAGAATGTAAAGGCAGATGTTTTTACGCATACCTTTCTCTTTTGAAGCAAACTCGTCTGTACA  
AAGTTGGCTATGTGACCCTGATGCAATGGAGCAGGAGAAACACCTTTAACAATGCTTCAGAGTCAGGTTCCCAA  
CATTGTTAAAGCTCTTCACAAACAGATGAAAGAAAAAGTGTGAAGACCCGACAGTGTGTTTTAACATGTTAAC  
TGAGCTGGTAAATGTATTACCTGGGGCCCTAACTCAACACATTCTGTACTTGTACCAGGAATCATTTTCTCACT  
GAATGATAAATCAAGCTCATCGAATTTGAAGATCGATGCTTTGTCTATGCTATACGTAATCCTCTGTAACCATTC  
TCCTCAAGTCTTCCATCCTCACGTTACGGCTTTGGTTCCTCCAGTGGTGGCTTGTGTTGGAGACCCATTTTACAA  
AATTACATCTGAAGCACTTCTTGTACTCAACAGCTTGTCAAAGTAATTCGTCCTTTAGATCAGCCTTCTCGTT  
TGATGCAACTCCTTATATCAAAGATCTATTTACCTGTACCATTAAAGAGATTAAAAGCAGCTGACATTGATCAGGA  
AGTCAAGGAAAGGGCTATTTCTGTATGGGACAAATATTTGCAACCTTGAGACAATTTGGGTTCTGACTTGCC  
TAATACACTTCAGATTTCTTGGAGAGACTAAAGAATGAAATTACCAGGTTAACTACAGTAAAGGCATTGACACT  
GATTGCTGGGTACCTTTGAAGATAGATTGAGGCCTGTCTGGGAGAAGGGGTTCTATCCTTGCTTCATTTCT  
TAGAAAAAACCAGAGAGCTTTGAACTGGGTACTCTTCTGCCCTTGATATTCTAATAAAAAACTATAGTGACAG  
CTTGACAGCTGCCATGATTGATGCAGTCTAGATGAGCTCCACCTCTTATCAGCGAAAGTGATATGCATGTTTC  
ACAAATGGCCATCAGTTTCTTACCCTTTGGCAAAAGTATATCCCTCCTCCCTTTCAAAGATAAGTGGATCCAT  
TCTCAATGAACCTTATTGGACTTGTGAGATCACCTTATTGCAAGGGGGAGCTCTTAGTGCCATGCTAGACTTTTT  
CCAAGCTCTGGTTGTCACTGGAACAAATAATTTAGGATACATGGATTGTGTCGCGATGCTGACTGGTCCAGTTTA  
CTCTCAGAGCACAGCTCTTACTCATAAGCAGTCTTATTATTCATTGCCAAATGTGTAGCTGCCCTTACTCGAGC  
ATGCCCTAAAGAGGGACCAGCTGTAGTAGGTGAGTTTATTCAGATGTCAAGAACTCAAGGTCTACAGATTCCAT  
TCGTCTCTTAGCTCTACTTTCTCTTGGAGAAGTTGGGCATCATATTGACTTAAGTGGACAGTTGGAATAAATC  
TGTAATACTAGAAGCTTCTCATCTCCTAGTGAAGAAGTCAAATCAGCTGCATCCTATGCATTAGGCAGCATTAG  
TGTGGGCAACCTTCTGAATATCTGCCGTTTGTCTGCAAGAAATAACTAGTCAACCCAAAAGGCAGTATCTTTT  
ACTTCATTCTTGAAGGAAATTTAGCTGTGCATCAGTGGTGGGCCTTAAACCATATGTTGAAAACATCTGGGC  
CTTATTACTAAAGCACTGTGAGTGTGCAGAGGAAGGAACCAGAAATGTTGTTGCTGAATGTCTAGGAAAACAC  
TCTAATTGATCCAGAACTCTCCTTCCACGGCTTAAGGGGTACTTGATATCAGGCTCATCATATGCCGAAGCTC  
AGTGGTTACGGCTGTGAAATTTACAATTTCTGACCATCCACAACCTATTGATCCACTGTTAAAGAACTGCATAGG  
TGATTCTCTAAAACTTTGGAAGACCCAGATTTGAATGTGAGAAGAGTAGCCTTGGTCACATTTAATTCAGCAGC  
ACATAACAAGCCATCATTAAATAAGGGATCTATTGGATACGTGTTCTTCCACATCTTTACAATGAACAAAAGTTAG  
AAAGGAGCTTATAAGAGAGGTAGAAATGGGTCCATTTAAACATACGGTTGATGATGGTCTGGATATTAGAAAGGC

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**FIGURE 3714B**

AGCATTGAGTGTATGTACACACTTCTAGACAGTTGTCTTGATAGACTTGATATCTTTGAATTTCTAAATCATGT  
TGAAGATGGTTTGAAGGACCATTATGATATTAAGATGCTGACATTTTAAATGTTGGTGAGACTGTCTACCCCTTG  
TCCAAGTGCACTACTGCAGAGGTTGGACCGACTTGTGAGCCATTACGTGCAACATGTACAATAAGGTAAAGGC  
AAACTCAGTAAAGCAGGAGTTTGAAAAACAAGATGAATTAAAGCGATCTGCCATGAGAGCAGTAGCAGCACTGCT  
AACCATTCCAGAAGCAGAGAAGAGTCCACTGATGAGTGAATTCCAGTCACAGATCAGTTCTAACCTGAGCTGGC  
GGCTATCTTTGAAAGTATCCAGAAAGATTATCATCTACTAACTTGAATCAATGGACACTAGTTAGATGTTTGT  
TCACCATGGGACCATTACATATGACCATACAATGCACTGAATTGACAGGTAAATCATAAGACATGGAAGAGAA  
GTGTCTAAAAGCTTCAAAATGTTCCACTTTTTTTTCCCTTCATGGAGACTGTTTGTGTTGGCTTTCTTCCATTGTTG  
TTTTGTAGCATTTATTTTCAGAAATGTGATTTCCATAATCCAGAGGTTGTAAACCACCTAGTGTGTTTAGTGTT  
ACAGCAACATTTGAAATGGAACATAAAAGTTAGGATTTTATGGAGTATGGAGATAGGGTCCAGTATCTATTTACC  
CTGTAATGTTTAGGATTAATGTTAAATTTTGTGACCATGAATTTCTTTCTTTTATAAATTTTCTCATTAA  
AATCAAAATCTTGCAAAACAAAACCATGTTTCTTTTCTTGATAACTTTTGTGTTTCAGCAACATAAATGA  
TTTTTAGCTGGCAGACAAGAATATCCATATAAGATTTGTTAACCATTTCAGAGAGTTTGCAATTTTTAAAGAT  
AATAAGGTATCATTTTTAAGTATGAAAATTAACAATATCCCTGTTGCGCACACTAATTTGCATGAGTAAGTTA  
CAAAATATGTATCGTCTGTAAAGCAGCATGTGCAGATTATTCATAATATAGAAGTTAAAAAAGTATTAGTGCAAT  
TTTCAGATATTTATTTTGCACAGAAAACACATTATCTGGAGAGAAAGAAAGGAGAATTTTGAGACTTGGGTTT  
TCTTAATGCCAGTGTGAATTTGCAGATGTTTTTCAGAAAATCAAGTCACAGTAACAATTTGCCACTTTTTCTATT  
ATAAATCTTCTTACTTAAATTTTGAATATTTAGTTTTCTCAGTTACCCATTTGTGTGTGTGTGATTCCACTTAG  
AAATTTCTTAAACCAGATTTTTCTTTTCAATCCGTTTGGATGTCTACATTCCTTATCAAAGGATATAAATACTGTG  
TATGCTTTTGAATTTTATTTTTAGGAAAATCTGAAGCCAGCTATCACAGGTTTGTTAGCTAATAATAGTATTTT  
CTTTTAGTTGAGTTAGGTTTTTCCCCATCTCCTGTAGAGCGAATTTACATATTGTATTGGGTAAGTGTTCACTAC  
TTTTCTGATTAAGGGATCTGTGCTGGGGAACAAAGCTTTGTCAGTACCTTATATTGTAGTTAAAATTTTATTTA  
ACATATCCTTCAGTGAGCTCATTTACACTGTAGCCTCTTCCTTAAAATTTGTGGTGCTCCTGTAACAGTAAGAA  
CTAATCTGAAATAAAAGACATCTCCTAATGCTGTGCAACATAGTTTACATGTATTGAAGGAGGCAGTTGTTAA  
ATTGAGTGACCAATTTAAGCAATCAGATATTTGAAAACAGTACCCCTTTAGTTTGAAGTGTGAATTAGAAACAC  
TTTTCTGCTGTATTACTACCTGCTTTAACATCCAAATATACAGTGATTTTAAATGATAACATACTGTGGTTATT  
AGATTAAACAGCTTGATTTTGAATGTTTCAGATGATAATGCAGAAGACATCACTTCTAGTAAGGATTTTGAAGTAGT  
CATTGATGTTGAAGTTGGTGCCATTTCAAATGTGGCAGGTGATAATCTTTTACCATAATTTGCATAAACTGTA  
ATAGAAGTTTATTTTGAGATGTTAGTATATTATGTACTATGCATTTCTGTGGTATAGATGTTGTGATATATTTA  
AGTATTTGGTTACATGGTTTACAATAAATTACAATACTGCAGGC



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**FIGURE 3715**

CTGGCTTACAGGGCGGCGGGGGTGTGTGTCCTCTGTTAAGAGTGCTACTCGCCCCGGGGTTGATCTGTGCATGC  
CACTCCTGGGTGACACGGTGAGGTGCGGCGTCTGCGAGGACGCGGCGGTGGAGTAGAAGGGCAGCCGGAGACAGGC  
CCGGCGCCCCCTTCCGAGGCTAGACGGCCCCAGCTTCGCGGGGATCATGGCATTGCTGGTGGACCGAGTGCGGGGC  
CACTGGCGAATCGCCGCGGGGCTCCTGTTCACCTGCTGGTGTCCATCTGCATTGTGTTCCCTCAACAAATGGATT  
TATGTGTACCACGGCTTCCCCAACATGAGCCTGACCCCTGGTGCACCTTCGTGGTCACCTGGCTGGGCTTGTATATC  
TGCCAGAAGCTGGACATCTTTGCCCCCAAAGTCTGCCGCCCTCCAGGCTCCTCCTCCTGGCCCTCAGCTTCTGT  
GGCTTTGTGGTCTTCACTAACCTTTCTCTGCAGAACACACCATAGGCACCTATCAGCTGGCCAAGGCCATGACC  
ACGCCGGTGATCATAGCCATCCAGACCTTCTGCTACCAGAAAACCTTCTCCACCAGAATCCAGCTCACGCTGATT  
CCTATAACTTTAGGTGTAATCCTAAATTCTTATTACGATGTGAAGTTTAATTTCCCTTGGAATGGTGTGTTGCTGCT  
CTTGGTGTGTTTAGTTACATCCCTTTATCAAGTGTGGGTAGGAGCCAAACAGCATGAATTACAAGTGAAGTCAATG  
CAGCTGCTGTACTACCAGGCTCCGATGTCTATCTGCCATGTTGCTGGTGTGCTGTGCCCTTCTTTGAGCCAGTGTGTT  
GGAGAAGGAGGAATATTGGTCCCTGXX  
XXTATAACATGTTCCGACACTTCAAG  
TTCTGCATTACTTTATTCGGAGGATATGTTTTATTTAAGGATCCACTGTCCATTAAATCAGGCCCTTGGCATTTTA  
TGTACATTATTTGGCATTCTCGCCTATACCCACTTTAAGCTCAGTGAACAGGAAGGAAGTAGGAGTAAACTGGCA  
CAACGTCCTTAATTGGGTTTTTGTGGAGAAAAGAATGTTGTCCCAAGAAGATAAAAAATATTGTTAAGTGTGCAA  
GTTATTAATAAAAAAAAAAATTGGGCCAGGCACGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCC  
AGCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGACCAACATGGAGAAACCTGTCTCAACTAATAATACA  
AAATTAGCCAGGCGTGGTGGCGCATGCCTGTAATCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATCACTTGAAC  
CCGGGAGGCGGCGGTTGCAGTGAGCCGAGATCGTACCATTGCACTCCAGCCTGGGCAACAAGAGCGAAACTCCAT  
TTCAAAAAAAAAAATTGGTGACAGACTCAATGATGGAATGATTTGTGCGAATTAACACAAAGCAGATTTTATTC  
ATATAATGACTTTTTTTAAGAGTCTCTTTTTTAAAAAACTTAATTCTCTAAAACCGAAATGGTTCATGCTTCT  
TTTTAAAAATGATTGTATAAAATGTATGGAATGGTTAGCCTGGTGTGGTGGTGCACACCTGTAATCCCAGCTACT  
TGGGAGACTGAGACATGAGAATCGCTTGAGCCTGGGAGGCGGAGGTTGCAATGAGCCAAGATCGTACCCTGCAC  
TCCAGCCTGGGCGACAGAGCAAGACACTGTCTCTCTCTCTCTCCATATATATATGTGTGTGTGTGTATATATA  
TATATATGTGTGTGTGTGTGTGTATACATATATACACATATATACACACACATACATATACATGTGTATAT  
ATATAACCATCCCATATATATGTGGGATATATATATATATATATATGGATATGGTTATATATATGGGAATGGTTTG  
GGGTTGGTCCCAGCTGAGTATAGACAATTAAATTACGTGATAA

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**FIGURE 3716**

MQLLYYQAPMSSAMLLVAVPFFEPVFGEGGIFGPWSVSALLMVLLSGVIAFMVNLSIYWIIGNTSPVTYNMFGHF  
KFCITLFGGYVLFKDPLSINQALGILCTLFGILAYTHFKLSEQEGSRSKLAQRP

**FIGURE 3717**

GTTTTAGGGACAGACTGCTTCCGGGTGCGAAGGGCTTGCTTCCGGAGAGCGGGAAGGCTAAACCGCGGTAGCTAAA  
 CTGCAGCCAACTTTGGTTGTGTGTGGAAGGGCTTTAGCCATGGACAGGAGTGCGCTTTGGAGAGATATCATCCCC  
 TGTAAATCCGGGAGGCAGAGGTGACACGGACTGCACGGAAACAGAGTGCTCAGAAAAGAGTTTTACTTCAGGCATC  
 TCAAGATGAAAATTTTGGTAATACTACACCAAGAAACCAGGTTATCCCTCGAACTCCTAGCTCATTTCGACAGCC  
 TTTTACCCCAACAAGCCGAAGCTTACTAAGGCAGCCAGATATTTCTCGCATTCTTGGAAACAGGAGGGAAGTCGCC  
 CCGACTTACGCAGTCTTCAGGGTCTTTTGGAAATCTCTCCATGGTTACTAATCTGGATGACAGTAAGTAACTATCAG  
 TGCATTTTCATCAGCGTTTCCGGGCTGTTTACAAACACAGAGCCCCACAGTATAACAGAAGATGTAAGTATCAG  
 TGCTGTTATGTTACGTGAGGATGATCCTGGAGAAGCTGCATCCATGAGTATGTTTTCTGATTTCTCGAGTCTTT  
 TCTGAAGCACTCTTCGAGTACAGTTTTTGATCTTGTGGAAGAGTATGAAAACATCTGTGGTAGTCAGGTGAATAT  
 ACTGAGTAAAAATAGTGAGTCGAGCAACACCTGGACTTCAAAAATTTTCAAAAACAGCCAGTATGCTCTGGCTTCT  
 TCAACAGGAGATGGTCATGAGGCTGCTGGCTTCTTGTATAGAGACAGAATACAGTCTGCATTAGAAGAGGA  
 AAGTGTATTTCGAGTTACTGCTGTTAATGCCAGTGAAAAACAGTTGTGGAAGCGTTATTTTCAGAGGGATTCACT  
 TGTTCGACAAAGTCAGCTGGTGGTAGATTGGTTAGAGAGTATTGCCAAAGATGAAATTTGGAGAATTTTCTGATAA  
 TATTGAGTTTTATGCAAAATCAGTATATTGGGAAAATACTCTGCATACCTTAAACAAACGGCAGCTGACTTCTTA  
 CGTTGGGAAGTGTTTCGTCGCTTGTCACTGAATTGGACCTGATGCTCCCATAGACAGAAAATGCCCTTGATGA  
 TCTGGATAGAGAAGATGAAGTTAGATTACTCAAATATCTTTACTCTAATCCGTGCTGGAATGACAGAAGAGGC  
 ACAACGACTCTGTAAACGCTGTGGTCAAGCATGGAGAGCTGCAACACTTGAAGGCTGGAACTGTACCATGACCC  
 TAATGTTAATGGAGGAACAGAATTAGAACCTGTTGAAGGGAATCCATATAGACGCATTGGGAAAATAAGTTGCTG  
 GAGAATGGCAGAAGATGAGCTTTTTAATAGATACGAGAGCAATTTATGCAGCTTTAAGTGGGAATCTTAAGCA  
 GCTGCTTCTGTCTGTGACACCTGGGAAGACACAGTTTGGGCCACTTCCGGGTGATGGTGGACAGTCTGGTAGA  
 ACAGGAGATCCAGACATCAGTAGCAACTCTGGATGAAACTGAAGAATCCCTAGAGAATATCTGGGAGCAAACTG  
 GACGTTAGAAAAGGTTTTTGGGAACCTCAAGCTACTGACAAAAAGAGAGTTCTGGAAGAGAATCAAGAACATTA  
 TCATATAGTTCAAAAGTTTTCTATCCTGGGAGACATTGATGGTTTGATGGATGAGTTTAGCAAATGGCTTTCCAA  
 AAGCAGAAACAATCTACCTGGACACCTGCTTCGCTTTATGACTCACCTTATTTTGTTTTTCCGTACTCTGGGACT  
 ACAGACCAAGGAGGAAGTTTCTATTGAAGTTTTAAAGACATACATACAGCTTTTAATAAGAGAGAAACATACAAA  
 TCTTATAGCATTATACCTGTCATTGTGCTCAAGACCTAGCTGTTGCCAGTATGCATTATTTTGGAAAGTGT  
 TACAGAATTTGAACAGCGCCACCATTGCTGGAGTTGGCTAAAGAAGCAGATTGGATGTTGCAACAATAACAAA  
 AACTGTAGTTGAGAATATTCGAAAGAAAGATAATGGTGAATTTAGTCATCATGACCTGGCCCCAGCCCTAGATAC  
 TGGCACTACTGAGGAGGATCGTTTTAAAAATTGATGTAATTGACTGGTTGGTATTTGACCCAGCGCAGAGGGCAGA  
 AGCACTGAAACAGGCAATGCAATTATGAGAAAATTCTTGGCATCAAAAAGCAGCAAGCTGCAAAAAGAAGTATT  
 TGTGAAAATTCCTCAGGATTCTATAGCAGAAATCTATAATCAGTGCAGGAACAAGGAATGGAAGTCCACTTCC  
 TGCTGAAGATGATAATGCTATCCGAGAACATTTGTGCATCAGAGCTTATTTGGAAGCCCATGAAACCTTTAATGA  
 GTGGTTTAAAGCATATGAATTCAGTTCCACAAAACCTGCTTTGATACCTCAACCACTTTTACTGAGAAAGTGGC  
 TCATGAACACAAAAGAAAAGAAATATGAAATGGATTTTGGTATTTGGAAGGGCATTGGATGCCCTAACTGCTGA  
 TGTGAAGGAGAAAATGTATAACGCTTGTGTTGTTGTTGATGGAGGTGGATGGTGGATGTTAGAGAGGATGCCAA  
 AGAAGACCATGAAAGAACACATCAAATGGTCTTACTGAGAAAGCTTTGTCTGCCAATGTTGTGTTTTCTGCTTCA  
 TACGATATTGCACAGTACTGGTCAGTATCAGGAATGCCACAGTTAGCAGATATGGTATCCTCTGAGCGCCACAA  
 ACTGTACCTGGTATTTTCTAAGGAAGAGCTAAGGAAGTTGCTGCAGAAGCTCAGAGAGTCCCTCTCTAATGCTCCT  
 AGACCAGGGACTTGACCCATTAGGGTATGAAATTCAGTTATAGTTTAAATCTTCTCACTAATTTTCATGA  
 TAAATGAAGTTTTTAAATAAAATATACTTGTTATTAGTAATTTTTCTTTGCAATTACCATGTAAATTTAGACAT  
 TTGAATTTTGTACTTTTCAGAAATATTATCGTGACACTTCAACATGTAGGGATATCAGCGTTTCTCTGTGTGCTT  
 GTTAAATAAACTATATAAAAATTAATAATTTTCTGTTTTTACAAAAA

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**FIGURE 3718**

MDRSGFGEISSPVIREAEVTRTARKQSAQKRVLLQASQDENFGNTTPRNQVIPRTPSSFRQPFTPTSRSLLRQPD  
ISCILGTGGKSPRLTQSSGFFGNLSMVTNLDDSNWAAAFSSQRSGLFTNTEPHSITEDVTISAVMLREDDPGEAA  
SMSMFSDFLQSFLLKSSSTVFDLVEEYENICGSQVNILSKIIVSRATPGLQKFSKTASMLWLLQQEMVTWRLLASL  
YRDRIQSALEEEESVFAVIAVNASEKTVEALFQORDSLVRQSQLVVDWLESIAKDEIGEFSDNIEFYAKSVYWENT  
LHTLKQRQLTSYVGSVRPLVTELDPAPIRQKMPLDDLDREDEVRLKYLFTLIRAGMTEEAQRLCKRCGQAWRA  
ATLEGWKLYHDPNVNGGTELEPVEGNPYRRIWKISCWRMAEDELFNRYERAIYAALSGNLKQLLPVCDTWEDTVW  
AYFRVMVDSLVEQEIQTSVATLDETEELPREYLGANWTLEKVFEELQATDKKRVLEENQEHYHIVQKFLILGDID  
GLMDEFKWLKSRNNLPGHLLRFMTHLILFFRTLGLQTKEEVSIEVLKTYIQLLIREKHTNLIAFYTCHLPQDL  
AVAQYALFLESVTEFEQRHHCLELAKEADLDVATITKTVVENIRKKDNGEFSHHDLAPALDTGTTEEDRLKIDVI  
DWLVFDPAQRAEALKQGNAMRKFLASKKHEAAKEVFVKIPQDSIAEIYNQCEEQGMESPLPAEDDNAREHLCI  
RAYLEAHETFNWFKHMNSVPQKPALIPQPTFTEKVAHEHKEKKYEMDFGIWKGHLDALTADVKEKMYNVLLFVD  
GGWMVDVREDAKEDHERTHQMVLRLKLCPLMLCFLHTILHSTGQYQECQLQADMVSSERHKLYLVFSKEELRKL  
LQKLRESSLMLLDQGLDPLGYEIQ

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**FIGURE 3719**

CCTTCCAAGTAACTGGGATTACAGGCATGTACCACCATACCAGCTGATTTTTTTGTATTTTGTAGTAAAGACAGGG  
TTTCACCATGTTAGCCAGGCTGATCTTGAACCTCTAAACTCAAGTGATCTACTCACCTCAGCCTCCCAAAATGCT  
GGGATTACAGATGTGAGGCACCTGGCCTCAGATTTTTGATACTCTTAAACCTTCTGATCCTTAGTTTCTCTCTCC  
AAAATACTCTTTCTAGGTTAAAAAAGGCTCTTATATTGGTGCTATGTAAATGAAAATGTTTTTAGGTT  
TTCTTGATTAAACAATAGAGACAGGGTCTCCCTGTGTTGCCAGGCTGGTCTCGAACTCCTGGGCTCAAGAGATC  
CTCCTGCTTGCCCTCGCAAAGTGCTAAGTAGGATTACAGGCGTTAGCCACCACACCCGGCTGTAAAAATGTACT  
TATTCTCCAGCCTCTTTTGTATAAACCATAGTAAGGGATGGGAGTAATGATGTTATCTGTGAAAATAGCCACCAT  
TTACCCGTAAGACAAAACCTTGTAAAGCCTCCTGAGTCTAACCTAGATTACATCAGGCCCTTTTTCACACACAAA  
AAAATCCTTTATGGGATTTAATGGAATCTGTTGTTTCCCCCTAAGTTGAAAAACAACCTCTAAGACACTTTAAAGT  
ACCTTCTTGGCCTGGGTTACATGGTTCCAGCCTAGGTTTTCAGACTTTTGCTTAAGGCCAGTTTTAGAAACCCGT  
GAATTCAGAAAAGTTAATTCAGAAATTTGATAAACAGAATTGTTATTTAAAAACTAACTGGAAAGATTGTTAAGT  
TCTTTCTGAATTATTCAGAAATTTATGCATCATTTTCCCTTCAAGAAATGACAGGGTCAGCATGTGGAATCCAAGAT  
ACCTCTTGACTTCCTCTCAAGCTCCGTGTTTGGTCAGTGGAGGCCCATCCGAGCTCAGCACTGAGAAGTGTAGT  
TTCTTTGGGACCCATCTACCCTGACCACATCATGATGTTTCATCTGCAGCTGTTGCAAGGTGTTGAGATTGTATAA  
ACATAAATGTCACAAAAACTTTAAAAGAAGTGCAATTCTCAAAAGGTTAGGTGGACTAAAGCATTCTGTAAAGCA  
ACTGCTAATAATGAGCTTACAGTGGATTTGAATTTGAAAAATATAGTAACAAGCCTGTCAAATATCTGCAAGAAC  
TATGGAATAAACTACTGATGCAGTGAAGACAGTTGAAAAGATCAAACAAATGCCAAGCTATATTTATAATGAAC  
AAATTCAAGAAAAGGACTACGGAAAGTTTACAGGACATCAAAGAAGTCAGGCAAACTCATCTTGACCCCTGTTGC  
AGGCAAAGGAACGCAGCTGGAAGAAAAGATGATATAACAGTTAACAGGATGCAGACATGGCAGAGGTTTCTTAA  
AATCTCATTATCTATAACCATTTCTATATTTACATTTGAAAATCTCCTTTGGAGACTTAGAACCTCTAAATTATT  
GACTTATTTTTTATATAAGGTCACCTCCGATGAAAGGTGATTACAAAATCATCTACATTGCTGTCTACAAAACAGA  
TAATATGGATGTTTGATCGCATCTCATTGTTAACTCTTTACTGATATGTTTGTAATACAGAAGTGAAATGTGG

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**FIGURE 3720**

GTAAACCAGCCGGAGCGGCGCGGCAGCGGCAGGACCGCCGTGGCGCCTAGAGTAGCGACCCGGGGGAGCGCGGG  
GCGACGCTGGCTGCAGGGACCCGGTGACAGCGTGAGAGGTTGCGAGAGTACTAGGTTTTGACAAGCTTGCATCAT  
GCGTGAGTATAAGCTAGTCGTTCTTTGGCTCAGGAGGCGTTGGAAAGTCTGCTTTGACTGTACAATTTGTTCAAGG  
AATTTTTGTAGAAAAATACGATCCTACGATAGAAGATTCTTATAGAAAGCAAGTTGAAGTAGATGCACAACAGTG  
TATGCTTGAAATCTTGGTACTGCAGGAACGGAGCAATTTACAGCAATGAGGGATTATACATGAAAAATGGACA  
AGGATTTGCATTAGTTTATTCATCACAGCACAGTCCACATTTAACGATTTACAAGACCTGAGAGAACAGATTCT  
TCGAGTTAAAGACACTGATGATGTTCCAATGATTCTTGTGGTAATAAGTGTGACTTGGAAGATGAAAGAGTTGT  
AGGGAAGGAACAAGGTCAAAATCTAGCAAGACAATGGAACAACCTGTGCATTCTTAGAATCTTCTGCAAAATCAAA  
AATAAATGTTAATGAGATCTTTTATGACCTAGTGCGGCAATTAACAGAAAACTCCAGTGCCITGGGAAGGCTCG  
CAAAAAGTCATCATGTCAGCTGCTTTAATACTAAATGCATTGTAGCTCTGAGCCAGGCTCTGAAGAACTGTTGCG  
CCAATTCACAGTGCCAGCATTCCAACCTTTGTTAAACCTACCAACATCTTAAATGGACTTTCCTGTGGTGGTACC  
CTTTAAGAGGCGGATGAAAGCTACTATATCAGTTTGCACATTCTAATCACTTTCCAGTATCACAAGAGAGATTTT  
TACTTATATAATAGTCCTAGAGTTTGCAGCTGGTAAAACAGAGGCTACATCCAGTATTACTGCTAAGAGACATT  
CTTCATCCACCAATGTTGTACATGTATGAAATGGGTACTGTATACTTTAACATGCCCCATACTTTGTATTGGA  
GAGTACAATAATGTAAATCCTAAAAGCACCCTATTTTAGCATAATAAAAGAAAGTCCAAAGAGCTCCTATATAG  
ACTACTCCAGATAACTTCGCTTCTTTGATACTTGTAGCTTATTGTAATTTTTTTAAGAAATTCAGGTCATTAT  
TATTGTACAAAATAAGCGCTTTGATTAAACACAGCTATATAGTTTTTTAATTTTTTAAAAACCTGTGGAGACGGT  
GATCTTGTCTTTAAACATGATAGTCCTTTTCAGTATAATGTCTTAGATTAAAGACGTTGCCTTTAATATCTGTTG  
GGAAGGAAATGTCCAGACTTTTCAAATCTCTTATTATATGTTTCCTTTTTTGTGTTACATAGGGAACAATGTTA  
TAGTCGTGTGTACAGTGGGGGTCTACAACAAGAAGTGATATTTTCAAACAATTTTTTAATGATTTAACAATTTT  
TGTAATCATTTTTCAGGCTTCTGCAGCTGTAGATTCTCACTGTGAATCCCTTGCTTGCTCATGCATAAGTGATT  
TGCAATACCAATATACAGGTTTAGTATTTTGCCGTGTAGTGATTGTTTCACATGTGTAACGTTTTGTTGAGA  
TGTTAAATGGTGGACGAGTACTGTGGATGTGAATGTGGGAAGTAATTTAATCATAIGTAATTGGTCACAAGGCC  
TAATTTGCAGTAACTATTGCTGTTTTATTAAACATGCCTTGTGTGCTTTGTATGCATTAATGTTTGGATGTAAAG  
ATTGTGTGTCTATCCAACAGGGAGCCACAGTATTTAAATTGACCAACCTAATGTTACAACCTACTTTGAGGTGGCC  
AAATGTAAACTAAAAGCCTTAATTAAAGTGGTGCAATTTTGTAACCAAAAAA

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**FIGURE 3721**

MREYKLVVLGSGGVGKSALTVOFVQGIFVEKYDPTIEDSYRKQVEVDAQQCMLEILD  
TAGTEQFTAMRDLYMKNG  
QGFALVYSITAQSTFNDLQDLREQILRVKDTDDVPMILVGKCDLEDERVVGKEQ  
QNLARQWNNCAFLESSAKS  
KINVNEIFYDLVRQINRKTPVPGKARKKSSCQLL

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**FIGURE 3722**

TTTCCGCGCTACCTGCAGAGGGGTCCATACGGCGCTGTTCTGGATTCCCGTTGTAACCTAAAGGGAAACTTTTCAC  
AATGTCCGGAGCCCTTGATGTCCTGCAAATGAGGGAGGAGGATGTCCTTAAGTTCCTTGCAGCAGGAACCCACTT  
AGGTGGCACCAATCTTGACTTCCAGATGGAACAGTACATCTATGAAAGGAAAAGTGATGGCATCTATATCATAAA  
TCTGAAGAGGACCTGGGAGAAGCTTCTGCTGGCAGCTCATGCTATTGTTGCCATTGAAAACCCCTGCTGATGTCAG  
TGTTATATCCTCCAGGAATACTGGCCAGACGGCTGTGCTGAAGTTTGCTGCTGCCACTGGAGCCACTCCAATTGC  
TGGGCGCTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCAGCCTTCCGGGAGCCACGGCTTCTGTGGTTAC  
TGACCCAGGGCTGACCACCAGCCTCTCACGGAGGCATCTTATGTAACTACCTACCATTGCGCTGTGTAACAC  
AGATTCTCCTCTGCGCTATGTGGACATTGCCATCCCATGCAACAACAAGGGAGCTTACTCAGTGGGTTTGATGTG  
GTGGATGCTGGCTCGGGAAGTTCTGTGCATGCTTGGCACCATTTCCTGTGAACACCCATGGGAGGTCATGCCTGA  
TCTGTACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAGCAGGCTGCTGCTGAAAAGGCAGTGACCAAGGA  
GGAATTTCAGGGTGAATGGACTGCTCCAGCTCCTGAGTTCACTGCTATTACGCCTGAGGTTGCAGACTGGTCTGA  
AGGTGTACAGGTGCCCTCTGTGCCTATTACGCAATTCCTACTGAAGACTGGAGCTCTCAGCCTGCCATGGAAGA  
CTGGTCTGCAGCTCCCACTGCTCAGGCCACTGAATGGGTAGGAGCAACCACTGACTGGTCTTAAGCTGTTCTTGC  
ATAGGCTCTTAAGCAGCATGGAATAATGGTTGATGGAAAATAAGCATCAGTTTCT



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**FIGURE 3723**

MSGALDVLQMREEDVLKFLAAGTHLGGTNLDFQMEQYIYERKSDGIYIINLKRTWEKLLLAHAIVAIENPADVS  
VISSRNTGQTAVLKFAAATGATPIAGRFTPGTFTNQIQAAPREPRLLVVTDPRADHQPLTEASYVNLPTIALCNT  
DSPLRYVDIAIPCNNKGAYSVGLMWWMLAREVLCMLGTISCEHPWEVMPDLYFYRDPEEIEKEEQAAAEKAVTKE  
EFQGEWTAPAPEFTAIQPEVADWSEGVQVPSVPIQQFPTEDWSSQPAMEDWSAAPTQAATEWVGATTDWS

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**FIGURE 3724**

GGCACGAGAAAATTCATGCGAGGGAGACGTGGTGGGCGGTCTTCCTGTGACACGACCCTTGAGTGACAGTTCTA  
TTTGATTGCCTCCGGTACTGTGAGGAAAGGACACGACTCTATGGTGAGGACTGATGGACATACATTATCTGAGAA  
AAGAACTACCAGGTGACAAACAGCATGTTTGGTGCTTCAAGAAAGAAGTTTGTAGAGGGGGTCGACAGTGACTA  
CCATGACGAAAACATGTACTACAGCCAGTCTTCTATGTTTCCACATCGGTCAGAAAAAGATATGCTGGCATCACC  
ATCTACATCAGGTCAGCTGTCTCAGTTTGGGGCAAGTTTATACGGGCAACAAAGTGCACTAGGCCTTCCAATGAG  
GGGGATGAGCAACAATACCCCTCAGTTAAATCGCAGCTTATCACAAGGCACTCAGTTACCGAGCCACGTCACGCC  
AACAACAGGGGTACCAACAATGTCACCTTCACACGCCTCCATCTCCAAGCAGGGGTATTTGCGCTATGAATCCTAG  
GAATATGATGAACCACTCCAGGTTGGTCAGGGCATTGGAATTCCTAGCAGGACAAATAGCATGAGCAGTTTCAGG  
GTTAGGTAGCCCCAACAGAAGCTCGCCAAGCATAATATGTATGCCAAAGCAGCAGCCTTCTCGACAGCCTTTTAC  
TGTGAACAGTATGTCTGGATTGGGAATGAACAGGAATCAGGCATTGGGAATGAATAACTCCTTATCAAGTAACAT  
TTTTAATGGAACAGACGGAAGTGAAAATGTGACAGGATTGGACCTTTCAGATTTCCAGCATTAGCAGACCGAAA  
CAGGAGGGAAGGAAGTGGAATACCCAACCTCCATTAAATAAACCCCTTGGCTGGAAGAGCTCCTTATGTTGGAATGGT  
AACAAAACCAGCAAATGAACAATCCCAGGACTTCTCAATACACAATGAAGATTTTCCAGCATTACCAGGCTCCAG  
CTATAAAGATCCAACATCAAGTAATGATGACAGTAAATCTAATTTGAATACATCTGGCAAGACAACCTTCAAGTAC  
AGATGGACCCAAATTCCTGGAGATAAAAGTTCAACAACACAAAATAATAACCAGCAGAAAAAAGGGATCCAGGT  
GTTACCTGATGGTCGGGTTACTAACATTCTCAAGGGATGGTGACGGACCAATTTGGAATGATTGGCCTGTTAAC  
ATTTATCAGGGCAGCAGAGACAGACCCAGGAATGGTACATCTTGCAATTAGGAAGTGACTTAACAACATTAGGCCT  
CAATCTGAACCTCTCTGAAAATCTCTACCCCAAATTTGCGTCACCCCTGGGCATCTTCACCTTGTCGACCTCAAGA  
CATAGACTTCCATGTTCCATCTGAGTACTTAACGAACATTACATTAGGGATAAGCTGGCTGCAATAAACTTGG  
CCGATATGGTGAAGACCTTCTCTTCTATCTCTATTACATGAATGGAGGAGACGTATTACAACCTTTAGCTGCAGT  
GGAGCTTTTTTAACCGTGATTGGAGATACCACAAAGAAGAACGAGTATGGATTACCAGGGCACCAGGCATGGAGCC  
AACAATGAAAACCAATACCTATGAGAGGGGAACATATTACTTCTTTGACTGTCTTAACTGGAGGAAAGTAGCTAA  
GGAGTTCCATCTGGAATATGACAAATTAGAAGAACGGCCTCACCTGCCATCCACCTTCAACTACAACCCTGCTCA  
GCAAGCCTTCTTAAAAA

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**FIGURE 3725**

MVRTDGHTLSEKRNYQVTNSMFGASRKKFVEGVDSYHDENMYYSQSSMFPHRSEKDMLASPSTSGQLSQFGASL  
YGQQSALGLPMRGMSNNTPLNRSLSQGTQLPSHVTPPTTGVPITMSLHTPPSPSRGILPMNPRNMMNHSQVGGIG  
IPSRITNSMSSSGLGSPNRSSPSIICMPKQQPSRQPFTVNSMSGFGMNRNQAFGMNNSLSSNIFNGTDGSENVITGL  
DLSDFPALADRNRRREGSGNPTPLINPLAGRAPYVGMVTKPANEQSQDFSIHNEDFPALPGSSYKDP TSSNDDSKS  
NLNTSGKTTSSTDGPKFPGDKSSTTQNNNQKKGIQVLPDGRVTNIPQGMVTDQFGMIGLLTFIRAAETDPGMVH  
LALGSDLTTGLNLNSPENLYPKFASPWASSPCRQDIDFHVPSYLTNIHIRDKLAAIKLGRYGEDLLFYLYYM  
NGGDVLQLLAAVELFNRDWRYHKEERVWITRAPGMEPTMKTNTYERGTYFFDCLNWRKVAKFHFLEYDKLEERP  
HLPSTFNYNPAQQAF

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**FIGURE 3726**

CTGGTCCCGAGCACGAGCTGTGAGGGGATTACATTGTGTGCGGAACCTCCTCGGAACCATGGCGTCCCTTTCCCTT  
GCACCTGTTAACATCTTTAAGGCAGGAGCTGATGAAGAGAGAGCAGAGACAGCTCGTCTGACTTCTTTTATTGGT  
GCCATCGCCATTGGAGACTTGGTAAAGAGCACCTTGGGACCCAAAGGCATGGACAAAATTCTTCTAAGCAGTGGA  
CGAGATGCCTCTCTTATGGTAACCAATGATGGTGCCACTATTCTAAAAACATTGGTGTGACAATCCAGCAGCT  
AAAGTTTTAGTTGATATGTCAAGGGTTCAAGATGATGAAGTTGGTGTGCGCACTACCTCTGTTACCGTTTTAGCA  
GCAGAATTATTAAGGAAGCAGAATCTTTAATTGCAAAAAAGATTTCATCCACAGACCATCATAGCGGGTTGGAGA  
GAAGCCACGAAGGCTGCAAGAGAGGCGCTGTTGAGTTCTGCAGTTGATCATGGTTCCGATGAAGTTAAATTCCGT  
CAAGATTTAATGAATATTGCGGGCACAACATTATCCTCAAACTTCTTACTCATCACAAGACCACTTTACAAAG  
TTAGCTGTAGAAGCAGTTCTCAGACTGAAAGGCTCTGGCAACCTGGAGGCAATTCATATTATCAAGAAGCTAGGA  
GGAAGTTTGGCAGATTCCATTTAGATGAAGGCTTCTGTTGGATAAAAAAATTGGAGTAAATCAACCAAAACGA  
ATTGAAAATGCTAAAATTCTTATTGCAAATACTGGTATGGATACAGACAAAATAAAGATATTTGGTTCCCGGGTA  
AGAGTTGACTCTACAGCAAAGGTTGCAGAAATAGAACATGCGGAAAAGGAAAAAATGAAGGAGAAAGTTGAACGT  
ATTCTTAAGCATGGAATAAATTGCTTTATTAACAGGCAATTAATTTATAATTATCCTGAACAGCTCTTTGGTGTCT  
GCTGGTGTCTATGGCTATTGAGCATGCAGATTTTGCAGGTGTGGAACGCCTAGCTCTTGTACAGGTGGTGAAATT  
GCCTCTACCTTTGATCACCCAGAACTGGTGAAGCTTGGAAGTTGCAAACCTTATCGAGGAAGTCATGATTGGAGAA  
GACAAACTCATTCACTTTTCTGGGGTTGCCCTTGGTGAGGCTTGTACCATTGTTTTGGGTGGTGCCTCAACAA  
ATTTTAGATGAAGCAGAAAGATCATTGCATGATGCTCTTGTGTTCTTGCGCAAACCTGTAAAGGACTCTAGAACA  
GTTTATGGAGGAGGCTGTTCTGAGATGTTGATGGCTCATGCTGTGACACAGCTTGCCAATAGAACACCAGGCAAA  
GAAGCTGTTGCAATGGAGTCTTATGCTAAAGCACTGAGAATGTTGCCAACCATCATAGCTGACAATGCAGGCTAT  
GACAGTGCAGACCTGGTGGCACAGCTCAGGGCTGCTCACAGTGAAGGCAATACCACTGCTGGATTGGATATGAGG  
GAAGGCACCATTGGAGATATGGCTATCCTGGGTATAACAGAAAGTTTTCAAGTGAAGCGACAGGTTCTTCTGAGT  
GCAGCTGAAGCAGCAGAGGTGATTCTGCGTGTGGACAACATCATCAAAGCGGCACCCAGGAAACGTGTCCCTGAT  
CACCACCCCTGTTAAGCATTCCCACGTGCTGTCTGATCTTTGGACCAGTTTCTAGCAAAGTTGTGTTTGAAAGATA  
CTCTATTAAAGAAGACTGTGGAATCTGTTTATCGGTGCCATTATATCCTTAAGTTTGGATATTTAGCTGACCTT  
CGCTTTAACATAGGTCTAATTTATTTGCCGTGTCAATTTCCATACAAATCAGTTGATTTAAAAAAGTTTCAATTTCT  
CATACTGTGCATTAAAAATAAAATTTGAACAAT

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**FIGURE 3727**

CGGCGTTCTCCACCTGCGCGGGCCTGAATGGCCCTTCAGGAGCACAGTCGGCCTGAGGAGTTGACGGTTACTCACC  
GCCGTGAGCCCAAGTAACTCGCCCTCCTTCGGCTAAAAACCTCCGCCTGGGCGCGCGACAGGAGCGCGGTCT  
CTGAGGGGAGCGGCGACCCCGCCAGCCCCGGTCTCTTTCCCTGGCGGGCGCGGCTTCTTCCGTGGGACAATATGT  
TCAAGAGAATGGCCGAATTTGGGCCTGACTCCGGCGGGAGAGTAAAGGGTGTTACTATCGTTAAACCAATAGTTT  
ACGGTAATGTTGCTCGGTATTTTGGAAAGAAAAGAGAAGAAGATGGGCACACTCATCAGTGGACAGTATATGTGA  
AACCATATAGAAATGAGGATATGTCAGCATATGTGAAGAAAATCCAGTTTAAATTACATGAAAGCTATGGCAATC  
CTTTAAGAGTTGTTACTAAACCTCCATATGAAATTACTGAAACAGGATGGGGTGAATTCGAAATAATCATCAAAA  
TATTTTTCATTGACCCTAATGAAAGACCTGTAACCCTGTATCATTTGCTAAAGCTGTTTCAATCAGACACCAATG  
CAATGCTGGGGAAAAGACAGTGGTTTCAGAGTTCTATGATGAAATGATATTTCAAGACCCAACAGCAATGATGC  
AACAATTATTGACAACATCTCGTCAGCTAACATTAGGAGCCTATAAGCATGAAACAGAATTTGCAGAGCTTGAAG  
TGAAACCAGAGAAAAATTAGAAGCTGCTAAGAAAAAACAGCTTTGAGATTGCAGAGCTTAAGGAGAGATTAA  
AAGCAAGTCGTGAAACTATAAATTGTTTAAAAAATGAAATCAGAAAACCTGAAGAAGATGACCAAGCAAAAGACA  
TATAAACAGTTCTCATGAGAACTTGGTAGTAAGCTAAACTGAAAATAAGGTGGGCTTCACTGGAGAAATGGACTT  
ACTGCAAAATGCTGTGATGTTTCTTAGAGGAACCTTCATATACAGCTGTTGACCATGAATTTCTTAGCAATAGGAAT  
TTGTACTATTTAAGCAATCTTTAATGGAAAATATGTGTGTAAGAATGGATGCTATATAGGTATTTACCAACCCA  
TTTTAAGAAAATTCTATGATATTAAGCACAGTTTTTAAAAATGTTTATTGTAGTATATGTATAGCTTATTACCCT  
TTTGACAGGCATCAAAATTTCAATTATAAAGTATTACTTGTACAAATTTGTACTTCTTAGTGGCTAGAATTAGT  
GAAGAACTTAATGTGTATATTTAATTTCTTCAAGTTCTTACCTGCCCCATCCTTTTTTGTATATGATGTGTCC  
AGTAAGTATTCAATAAATGTAGTTTACAGATCCTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3728**

MFKRMAEFGPDSSGGRVKGVTIVKPIVYGNVARYFGKKREEDGHTHQWTVYVKPYRNEDMSAYVKKIQFKLHESYG  
NPLRVVTKPPYEITETGWGEFEIIKIFFIDPNERPVTLYHLLKLFQSDTNAMLGKKTIVSEFYDEMIFQDPTAM  
MQQLTTSRQLTLGAYKHETFAELEVKTREKLEAAKKKTSFEIAELKERLKASRETINCLKNEIRKLEEDDQAK  
DI

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**FIGURE 3729**

CTAGCACTCTGACCTAGCAGTCAACATGAAGGCTCTCATTGTTCTGGGGCTTGTCCTCCTTTCTGTTACGGTCCA  
GGGCAAGGTCTTTGAAAGGTGTGAGTTGGCCAGAACTCTGAAAAGATTGGGAATGGATGGCTACAGGGGAATCAG  
CCTAGCAAACCTGGATGTGTTTGGCCAAATGGGAGAGTGGTTACAACACACGAGCTACAACTACAATGCTGGAGA  
CAGAAGCACTGATTATGGGATATTTAGATCAATAGCCGCTACTGGTGTAATGATGGCAAAACCCAGGAGCAGT  
TAATGCCTGTCAATTTATCCTGCAGTGCTTTGCTGCAAGATAACATCGCTGATGCTGTAGCTTGTGCAAAGAGGGT  
TGTCCGTGATCCACAAGGCATTAGAGCATGGGTGGCATGGAGAAATCGTTGTCAAACAGAGATGTCCGTCAGTA  
TGTTCAAGGTTGTGGAGTGTAACCTCCAGAATTTTCCTTCTTCAGCTCATTTTGTCTCTCTCACATTAAGGGAGTA  
GGAATTAAGTGAAAGGTCACACTACCATTATTTCCCTTCAAACAAATAATATTTTACAGAAGCAGGAGCAAAA  
TATGGCCTTTCTTCTAAGAGATATAATGTTCACTAATGTGGTTATTTTACATTAAGCCTACAACATTTTTCAGTT  
TGCAAAATAGAACTAATACTGGTGAAAATTTACCTAAAACCTTGGTTATCAAATACATCTCCAGTACATTCCGTTT  
TTTTTTTTTTTTGAGACAGTCTCGCTCTGTGCGCCAGGCTGGAGTGCAGTGGCGCAATCTCGGCTCACTGCAACC  
TCCACCTCCCGGGTTACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACGGGCGCCCGCCACCACG  
CCCGGCTAATTTTTTGTATTTTTTAGTAGAGACAGGGTTTACCCTGTTAGCCAGGATGGTCTCGATCTCCTGACC  
TTGTGATCCACCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCCGCCACATTCAGT  
TCTTATCAAAGAAATAACCCAGACTTAATCTTGAATGATACGATTATGCCCAATATTAAGTAAAAAATAAGAA  
AAGGTTATCTTAAATAGATCTTAGGCAAAATACCAGCTGATGAAGGCATCTGATGCCTTCATCTGTTTCAGTCATC  
TCCAAAAACAGTAAAAATAACCACTTTTGTGGGCAATATGAAATTTTAAAGGAGTAGAATACCAAATGATAG  
AAACAGACTGCCTGAATTGAGAATTTGATTTCTTAAAGTGTGTTTCTTTCTAAATTGCTGTTCCCTTAATTTGAT  
TAATTTAATTCATGTATTATGATTAAATCTGAGGCAGATGAGCTTACAAGTATTGAAATAATTACTAATTAATCA  
CAAATGTGAAGTTATGCATGATGTAAAAAATACAAACATTCTAATTAAAGGCTTTGCAACAC

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**FIGURE 3730**

MKALIVLGLVLLSVTVQGKVFERCELARTLKRLGMDGYRGISLANWMCLAKWESGYNTRATNYNAGDRSTDYGIF  
QINSRYWCNDGKTPGAVNACHLSCSALLQDNIADAVACAKRVVRDPQGIRAWVAWRNRCQNRDVRQYVQGCGV



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**FIGURE 3731**

CCCTGAGTCACTGCCTGCGCAGCTCCGGCCGCCTGGCTCCCCATACTAGTCGCCGATATTTGGAGTTCTTACAAC  
ATGGCAGACATTGACAACAAAGAACAGTCTGAACTTGATCAAGATTTGGATGATGTTGAAGAAGTAGAAGAAGAG  
GAAACTGGTGAAGAAACAAACTCAAAGCACGTCAGCTAACTGTTTCTGATGATGCAAAATCCTCAGATTCTTGCA  
GCCCTTCAAGAAAGACTTGATGGTCTGGTAGAAACACCAACAGGATACATTGAAAGCCTGCCTAGGGTAGTTAAA  
AGACGAGTGAATGCTCTCAAAAACCTGCAAGTTAAATGTGCACAGATAGAAGCCAAATTCTATGAGGAAGTTCAC  
GATCTTGAAAGGAAGTATGCTGTTCTCTATCAGCCTCTATTTGATAAGCGATTTGAAATTATTAATGCAATTTAT  
GAACCTACGGAAAGAAGATGTGAATGGAACCAGATGAAGAAGATGAGATTTCCGAGGAATTGAAAGAAAAGGCC  
AAGATTGAAGATGAGAAAAAGATGAAGAAAAAGAAGACCCCAAAGGAATTCCTGAATTTTGGTTAACTGTTTTT  
AAGAATGTTGACTTGCTCAGTGATATGGTTCAGGAACACGATGAACCTATTCTGAAGCACTTGAAAGATATTTAA  
GTGAAGTTCTCAGATGCTGGCCAGCCTATGAGTTTTGTCTTAGAATTTCACTTTGAACCCAATGAATATTTTACA  
AATGAAGTGCTGACAAAGACATACAGGATGAGGTGAGAACACAGATGATTCTGATCCCTTTTCTTTTGATGGACCA  
GAAATTATGGGTTGTACAGGGTGCCAGATAGATTGGAAGAAAGGAAAGAAATGTCACCTTTGAAAATCTATTAAGAAG  
AAGCAGAAACACAAGGGACGTGGGACAGTTCGTACTGTGACTAAAACAGTTTCCAATGACTCTTCTTTAACTTT  
TTTGGCCCTCCTGAAGTTTCTGAGAGTGGAGATCTGGATGATGATGCTGAAGCTATCCTTGCTGCAGACTTCGAA  
ATTGGTCACTTTTTACGTGAGCGTATAATCCCAAGATCAGTGTTATATTTTACTGGAGAAGCTATTGAAGATGAT  
GATGATGATTATGATGAAGAAGGTGAAGAAGCGGATGAGGAAGGGGAAGAAGAAGGAGATGAGGAAAATGATCCA  
GACTATGACCCAAAGAAGGATCAAACCCAGCAGAGTGCAAGCAGCAGTGAAGCAGGATGTATGTGGCCTTGAGG  
ATAACCTGCACTGGTCTACCTTCTGCTTCCCTGGAAAGGATGAATTTACATCATTTGACAAGCCTATTTTCAAGT  
TATTTGTTGTTTGTGTTGCTTGTGTTTTGTTTTGTCAGCTAAAATAAAAATTTCAAATACAATTTTAGTCTTACAA  
GATAATGTCTTAATTTTGTACCAATTCAGGTAGAAGTAGAGGCCTACCTTGAATTAAGGGTTATACTCAGTTTTT  
AACACATTGTTGAAGAAAAGGTACCAGCTTTGGAACGAGATGCTATACTAATAAGCAAGT

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**FIGURE 3732A**

AGAGGCCAGGAGGCTGGGTGAGGCGCTGAGACGGTTTGGCGGTGAGTCCTGGGCCAGGCGCAGCTGAAAGGCC  
GCAACCCGGGAAACGTCAAAACAAACAGAAGGACTTGGGATTCCGGAGCAGTCGCCCCCTATCGCTGCTCCTGCAG  
TTGCGGACGCCACCGACCCCGCCGCGGAGGACTGGGCACTGAAAGGCCTCTAGGCCTAGGCGCGGCCCGCGGAG  
CCAGACGTGTTGCTGCCGTGAGTAAACGAGCGCCCTCTCCGCACTCGTTTACAAATTAAATGGAGGAAATTC  
GTTGGCCAACTGGATACTAACAAGCTAGAGGCCATCGCTCAGGAGATTACGTAGACCTGATAGAGGATTCTTG  
TTTGGGATTCTGCTTTGAGGTGCACCGGCGAGTCAAGTGTGGCTACTTCTACCTGGAGTTCGCAGAGACTGGTAG  
CGTGAAGGATTTTGGCATTTCAGCCAGTGAAGACAAAGGAGCGTGCCGCTCCCGCTTTGCTCCCTTCCCGGAGA  
ACCTGGGAATGGGCCTGATCAGCAGCTGCAGCGCTCACCTCCGGAATTCAGTAGCTGCAAAATGAGAGTCTGAA  
AGTGGCCAGGACAATAACATAGACTGGTCTGTGGCTTCGAGGAGTAAGCTAAGTAGAAAAAGTAGAAAAATCA  
GACAAAAGTTTTTAATTCCTTGAAGATCCTAGCATTAAAAACCCAAAGTGGAATAATTTAGGAATCCTTTTTT  
TAAAGTGTATTACCTGGAGCAAGCTCTGAAGCCCTGGGCAGGAGGAGCTGCACAGCCTGCGGCCATGCAGTGCC  
TGTTGATCTCTAAACACACCAGGATGTGCACAAGATCCTGTAGTGCCCCCAGTGACAGGTGAGCAGTTGTGTGC  
CCAGCATATAAAATTTTTGGTTCCTCAGCCTTTCTGTCTGCCTGATGTCAAGGGCTTCTTGGACAGTTTGGACGT  
TACAGTTCGTGAGGCCGTGATCAGTGGCCTGCAGTGGGACTGCTCCTTTGATATCTGAACCTCTGTTATGGGCTT  
CTCTGAGACAAGTAAATGTCAGGTGCAAGATCTGGATACTAACAGTTTCAGTTTGGGAAATCCAAGAAAAAGAAT  
TATCAAGTTTGATAGGGAAGCTCTGTAGCCTTGACTCCAGCAAGAAGAAAGGTCAAACACAGTGTTCCTCCAA  
AGTCCAGACTACAATGATTTCAGCTGACTTGAGGACAAGGCCTAGCATTTGGCTGAGCAGAGCCCTCTCCTTGCC  
CTCCAACCTGGTGGCATAGGCTTGGCAAATGGACAACCTTGGTTGTCCAGACAGGTGAGGATTTCGGTTATGATCC  
CCTGGGGAGGTAGCAGGGACCTCTGCAACTATGCATGATTTCTCAAACCTCAAGATTCAATGTCTGGATGATTAT  
GCTGTGGATATAAGTTTAGTAGGGCGGTCAATTCCTACTCTGAGTTACTGGTTACCTAGCCAGTCCATGGGTGTG  
ACTTGGTCCCTTAAGTCAGGTCACTATCTGCCTCCACCCCTGGGGCAGGACTGAAGTATGGAAGAGCATCATGGC  
TGTCAGGAGGCTGTGGTTTGAAGCTGAGCCAGAGGGCACTTTCAGCTGCCCTCAATAATGTGAATGGATTAG  
TGCTAGGAGCCAAGGAGCAGGACTGGATTATCTCATCTGACTGTGTGCAGAATCCTGTTGAATGTCCCTGTTTTT  
TTTGGTTGGGCAGTCAGAGCTCTGCTATGGTGAACATCCAGACTGTCACCACTTTCTGTCTGCCGCTCGAAAGGG  
ATAGTCCTTTCCACTCGGTCCCTTTGGATCTTCTTGACAACAGGAGCAGTCCTTTTATGTTAGAGTCAGAGA  
AAGACCTCCAGAATCTCCTGACTTTAGGGAATGGTATAGGGGAAGATGGGAAGTAAGAGTCACATATCAAACTA  
CCCTCCACTTTATTCCCTGAGCGAGGGTTTATGAAGTATAAAGGGGTGGGAGCCCCGAGGTGAGCGGGAACGGTG  
CTGCTTTATTTGAAGTGTCTTACCTCATTCTGTGCCCCAGTAGGGGTCCAGCCTCATCTGTCTGGCTTGGC  
CCTGTGTTCTCCTGTCCCTGCTCCACTGCCTATCTGGTGCCCCAGGTGCTGCTTGCCTCCAGCTGTACAT  
TGAACAGTTTCAATTCAGCTCTTAATGCTCCTGCTTCCGAAGCCTGCCAATTTCTTTTTCTTGGCCTCTGTTT  
TTTTTTTTCTTTCTTTTCCCTTGTTTTTGTAGAAGACTCAGAGGAGAATCTTTCTTATGGCTCCCTCTGTGA  
GATTGGAATTGGAAGAGAACTTAATTTTTGTATTAAAGTGCAGTGTATGCCATATAAGCATTCTCTATATA  
GGACTGCTTTGCTAGTGTGCCCTCTGCTGTGTCTTACTTCATAAGGAGTTGTATCTTCCACCTCCATTTCAAT  
ACTGCCGTTAGGACCTAAGTAGAAGAGCAGTAAAGGCTGATTGACACACAGGGGGATGGAGTTGGTCTTGTCC  
ATTCTCTACCCCTTGCTGTGCATGTATCAATCCTTATCCAGAAGGTACTATTTAGACTGTATAGACTGATTTAG  
ATTACATACTTTAGAGGATTAAGGAAACCATAGAGTTTGGGCCTTGGAACTGTTACTGCCTTGTCTAGAGTTGT  
CCTGATCAGGCTTGGGGCCTAGTTACAGATTAGTCTTAAAGAATTGCATTAACCTAAAAAAATCAAACCTTGGC  
AAGAGCTAAAATAATTTGGAGATATCTTGGCCCTTGACTGTAGACGACATCTAAGAGGATGAAGAAAGGAGAGT  
CTAAGTGAGACTCTGGCCTACTTCTTAACAATGTCTTGAAGTGGGATGATGGTAAAGGAGAAAGGCCACAGTCC  
AATCCCTCTGCCTTCAGATAGGGAACCTCAAATCCTGAAATFACTGTTTTCTTTCTGGCCTTTTCTCCTGGTTAGA  
GGAGGAAGCGGAAAGTAGTTTTGAGTAGTATTTTGTGTTATTTACCCCTTTTGTTTTTTGTCTGGCCCCCTC  
TACCAATAGGGCAGTAGCCTCCTGCCCTGGATGGGTATAAGGTGGGCTTGGTCCAACAGGTGCCAGAGGGTACA  
TACTCCTTTCTGGGGAGAGAATGCTCCCTACCATATGATTGACAGTGGTTAGGAACTCTCCCTTTCCCTACCTAC  
CTTCCTTTAATAGCAGAATTCCTATTTTTCCCTTGATTATGTGTATTGATCACCCTGCAATCCTATTATGTATC  
TGAGTGTGTGTGTGTGTATGTGTGTTATGGGGGAAGGGGGGGTCTTTAAAAATTTCTGTGGTTTGTGGCT  
TTTTCTCCATACATTAGTTCCACCATCGCATGCCAGGGACCCTGCCTGGCATTATCGCATGCTGGGATCAT  
CGGGGGAGGGTAGTGAAGCTCACCACGTGCTTTGTTTTGGAGATTTTTATTTTTGCATAAGTAGTCCATCCTAT  
ACAGATAGCTGATTAACGTATTCCCTTTCCCTATGGCTGCTGGTGTAATAAACTGCATCTCCCCATTGGTA

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**FIGURE 3732B**

AACAGTAATAAAATTTTAAAAATG

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**FIGURE 3733**

MF SYLILCPSRGSSLICLAWPCVPPVPCSTAYLVPQVLLATPAVTLNSFNSALNAPASEACPISFFLASVFFFSF  
FFPCFCRRLRGESFLWLPLLRLLEENLIFCI

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**FIGURE 3734**

GAACCGCCATCTTCCAGTAATTCGCCAAAATGACGAACACAAAGGGAAAGAGGAGAGGCACCCCATATATGTTCT  
CTAGGCCTTTTAGAAAACATGGAGTTGTTTGGTTGGCCACATATATGCGAATCTATAAGAAAGGTGATATTGTAG  
ACATCAAGGGAATGGGTACTGTTCAAAAAGGAATGCCCCACAAGTGTACCATGGCAAACTGGAAGAGTCTACA  
ATGTTACCCAGCATACTGTTGGCATTGTTGTAAACAAACAAGTTAAGGGCAAGATTCTTGCCAAGAGAATTAATG  
TGCGTATTGAGCACATTAAGCACTCTAAGAGCTGAGATAGCTTCCTGAAACGCGTGAAGGAAAATGATCAGAAAA  
AGAAAGAAGCCAAAGAGAAAGGTACCTGGGTTCAACTAAAGCGCCAGCCTGCTCCACCCAGAGAAGCACACTTG  
TGAGAACCAATGGGAAGGAGCCTGAGCTGCTGGAACCTATTCCTGTGAATTCATGGCATATATAGGTGTTAAAAA  
AAAAAATAAATAAAGGACCTCTGGGCTAT

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**FIGURE 3735**

MTNTKGKRRGTPYMF SRPFRKHGVVCLATYMRIYKKGDIVDIKMGTVQKGMPHKCYHGKTGRVYNVTQHTVGIV  
V NKQVKGKILAKRINVRIEHIKHSKSEDSFLKRVKENDQKKKEAKEKGTWVQLKRQPAPPREAHFVRTNGKEPEL  
LEPIPCFEMA

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**FIGURE 3736A**

ATGAAGATGGCGGACGCGAAGCAGAAGCGGAACGAGCAGCTGAAACGCTGGATCGGCTCCGAGACGGACCTCGAG  
CCTCCGGTGGTGAAGCGCCAGAAGACCAAGGTGAAGTTTCGACGATGGCGCCGCTCTCCTGGCTGCTTGCTCCAGC  
GGCGACACGGACGAGGTCTCAAGCTGCTGCACCGCGCGCCGACATCAATTACGCCAATGTGGACGGACTCACT  
GCCCTGCACCAGGCTTGCAATTGATGACAATGTTGATATGGTGAAGTTTCTGGTAGAAAATGGAGCAAATATTAAT  
CAACCTGATAATGAAGGCTGGATACCACTACATGCAGCAGCTTCCTGTGGATATCTTGATATTGCAGAGTTTTG  
ATTGGTCAAGGAGCACATGTAGGGGTGTCAACAGTGAAGGAGATACACCTTTAGATATTGCGGAGGAGGAGGCA  
ATGGAAGAGCTACTTCAAAATGAAGTTAATCGGCAAGGGGTTGATATAGAAGCAGCTCGAAAGGAAGAAGAACGG  
ATCATGCTTAGAGATGCCAGGCAGTGGCTAAATAGTGGTCATATAAATGATGTCCGGCATGCAAAATCTGGAGGT  
ACAGCACTTCACGTTGCAGCTGCTAAAGGCTATACGGAAGTTTTAAACTTTTAAATACAGGCAGGCTATGATGTT  
AATATTAAAGACTATGATGGCTGGACACCTCTTCATGCTGCAGCTCATTGGGGTAAAGAAGAAGCATGTCGAATT  
TTAGTGGACAATCTGTGIGATATGGAGATGGTCAACAAAGTGGGCCAAACAGCCTTTGATGTAGCAGATGAAGAC  
ATTTTAGGATATTTAGAAGAGTTCAAAAGAAACAAATCTGCTCCATAGTGA AAAACGGGACAAGAAATCTCCA  
CTAATTGAATCAACAGCAAATATGGACAATAATCAGTCACAGAAGACCTTTAAAAACAAGAGACGTTGATTATT  
GAACCAGAGAAAAATGCATCCCGTATTGAATCTCTGGAACAAGAAAAGGTTGATGAAGAAGAAGAAGGAAAGAAG  
GATGAGTCTAGCTGCTCTAGTGAAGAAGATGAGGAAGATGACTCGGAATCAGAAGCTGAAACAGATAAGACAAAA  
CCCCTGGCTTCTGTAACATAATGCCAACACTTCTAGTACACAAGCAGCTCCTGTAGCTGTTACAACACCTACTGTG  
TCATCAGGTCAAGCAACACCTACATCACCTATTAAAAAGTTTCCAACCACAGCTACAAAAATTTCTCCCAAAGAA  
GAAGAGAGAAAAGATGAGTCTCCTGCAACTTGGAGGTTAGGACTTAGAAAGACGGGCAGCTATGGTGCACCTTGCT  
GAAATCACAGCATCTAAAGAGGGTCAGAAAAGAAAAGATACTGCAGGTGTTACACGTTACAGTTCAAGTCCAGAG  
CTTTCCTCCTCTTTGGATAATAAAGAAAAGGAGAAAGATAGTAAAGGAACTAGGCTTGCATATGTTGCACCTACA  
ATACCAAGACGACTAGCCAGTACATCTGACATTGAAGAGAAAAGAAAACAGAGATTCTTCAAGTTTGCGAACAAGT  
AGTTCATATACAAGGAGAAAATGGGAAGATGATCTTAAAAAAAATAGCTCAGTTAATGAAGGATCAACGTATCAT  
AAAAGTTGCTCCTTTGGTAGAAGACAAGATGATTTGATTAGTCTAGTGTCCAAGCACCACATCAACACCAACA  
GTTACCTCTGCAGCTGGGCTTCAGAAAAGCCTGCTTTCCAGCACAAGCACTACTACAAAGATTACAACGGGTTCT  
TCCTCAGCAGGCACACAAAGCAGTACCTCAAATCGTTTGTGGGCTGAGGATAGTACTGAGAAAAGAAAAGGACAGT  
GTTCTACGGCAGTGACCATTCCTGTTGCTCCAACGTGTTGTAATGCTGCAGCTTCTACCACAACCTGACTACA  
ACTACTGCTGGCACTGTCTCCTCCACAACAGAGGTGAGGAGAGACGCAGATCATACCTCACTCTGTTAGGGAT  
GAAGAGTCTGAATCCCAAAGAAAAGCAAGATCTAGACAAGCAAGACAATCTAGAAGATCAACACAGGGAGTGACA  
TTAACTGATCTTCAAGAAGCTGAGAAAACAATAGGAAGAAGTCGTTCTACCCGAACCAGAGAGAACAAGAAAATGAA  
GAAAAAGAAAAGAGGAAAAAGAGAAAACAAGATAAAGAGAAAACAAGAAGAAAAGAGGAGTCAAGAACATCTAGA  
GAAGATGAATATAAACAAAAGTACTCCAGAACGTATGATGAGACTTACCAGCGTTATAGGCCAGTATCAACTTCA  
AGTTCAACCACTCCATCCTCTTCACTTTTCTACTATGAGCAGTTCACTGTATGCTTCAAGTCAACTAAACAGGCCA  
AATAGTCTTGTAGGCATAACTTCTGCTTACTCCAGAGGAATAACAAAAGAAAATGAAAAGAGAGGGAGAAAAAGA  
GAAGAGGAGAAAAGAGGAGAAGATAAATCACACCTAAATCAATCAGAGAACGACGACGACCAAGAGAGAAAAGA  
AGATCTACAGGAGTTTCATTTTGGACACAAGATAGTGATGAAAATGAACAAGAACAACAATCAGACACAGAAGAG  
GGATCCAATAAGAAAAGAACTCAGACGGATTCCATTTCTAGATATGAAACCAGTTCTACATCAGCTGGTGATCGA  
TATGATTCCTTGCTGGGTCGCTCTGGATCATAAGTTACTTAGAAGAAAAGAAAACCTTACAGCAGCAGGCTAGAA  
AAGGATGACTCAACTGACTTTAAAAGCTTTATGAACAAATTTAGCTGAAAATGAAAAGCTGAAGGCACAGCTA  
CATGATACAAATATGGAACCTAACAGATCTTAAATTACAGTTGGAAAAGGCCACCCAGAGACAAGAAAGATTGCT  
GATAGATCACTGTTGGAATGAAAAAAGGGAACGAAGAGCTCTAGAAAAGAAGATATCTGAAATGGAAGAAGAG  
CTCAAAATGTTACCAGACCTAAAAGCAGACAACCAAGGCTAAAGGATGAAAATGGGGCCTTGATCAGAGTTATA  
AGCAAACTTTCCAAATAAAAAAAGCAGCAAGTAATGGAATTGCACATATTAGTAACCCAGTGGACCATA  
ATTGGCAGTCACTGGAAGTCTGGGAAGAATCCTTGAGAGCTGTCAATTTTCGGATATCCTGCCAAATGCCCTCTTA  
TCTAGAATTTTGTTCATTTTGTGTTAATTTCTGGGGTGTGTTTTGTTGTTGTTGTTTTGTTTTTTTTT  
TTTTAATCAAGACCATTTGTTTCAATGTCAGCTGCTGAGAAGATTTTTTTTTAATGACTGAGAAAACCTGTT  
TACAGCTCCAGCATATAAGGAAAGTGTTCAGGCCAGATATGCCTCAGATATTTAACCAGTAAGCCTTAGTTGTA  
CATAAATACTTTTGTGTCAACAAAACCTTTACAGCTCACAGAAGACAGTTACTCAACATTTTTTGATGTGCCAC  
AGTTTCGAGTTTTTCGATATTTAAATTTTTTGGCTTTTCATCTAAGTTTGGGTTTGTATTTTTCTCTTAACT

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**FIGURE 3736B**

CTTCATGTGGCAGAGTCTTCTATGTTTTACAGCTTTTTCATTACAGAAAAGAACACTTGCTCTTCTGTGATTAT  
TGTCATGTATTAGGCTAATGCTGTGTTGTCTCCACCTGGAAGTGAATTGCTTGGTGGAACATATGCTTTCACTG  
TTTGTGCAATATGCATTTATTTCTTATATGAATGCTTTAAAGTCATTTGAGGTTAGATCTTTTAATTCCTATTTT  
CTGCTTCATTGGTCACTTTTTTTTTTATTGTAGTATAAGATGTTAGATTCTGTAATCTTCACATTCATTTTAGCAG  
GTACTGAGTGATGCTGTATATACAAATAAGTGTATTGTTTTGATTTTTAGACCACCACATGGCATGCTTGACTAT  
TTCTTATTTCAAATGTCTGCTAATGCAGAGTAGGCTACTCCATGATAGTGTTAAAAAACAAAATTTGCTAACAAAT  
GTGATATAAAGACTTTAAAAGTTACACATTATGTGGAGCCCTATCTTTACAAAAGTTTCCTACTGTAAAGTGCTT  
TTATTTTCAGTTTTCACTTGATAGTACTCAACCATAATTAAAGTTGCATAAGATAATTGCTTTACATTCACATA  
CCTATATTTATCTGAGTGCTGTCTAAACTGTTGTGCTAGCCAAAGTAATGCTATGAAATCATTTCAGAAATTAA  
CCCGTGAGTTAATGTTAAATGCACGTGTTATTGCCATGTGAAGAGGCATCGACTTTGATACCACCATCATGTTTCA  
ACCATTTTATACATTTCACTGGCCTTTTTTTTTTTTTAAAGGAAAAAAAGCGCAAAACCAAGTACATAGTGACGA  
TGGCTTTTATTTGGACAAATAGCTTTTATATTTTCATTAAACCATGCAAAAAATACTACATCTTTCTGGCACATA  
ACTGTCTCCTTAACCACTGAACAGTTCAGCCATTTGAATAAATTGTACATTGTAAAGCTTATAGTAGCTGATTGT  
ATTATTGATTGTATTGTATACTATATTAAATGTGAATTTGT



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**FIGURE 3737**

CAGCCTTGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTCTCCCTCTCAGTAGCACGGAGTCCGAATTAAT  
TGGATTTCACTTCACTGGGGAGGAACAAAACTATCTGGGCAGCTTCATTGAGAGAGATTCACTGACACTAAGAGC  
CAGCGGCTGCAGCTGGGTGCAGAGAGAACCTCCGGCTTTACTTCTGTCTCGTCTGCCCCAACCGCTAGCCTCGGC  
TTGGGTAAGGCGAGGCGGAATTAAACCCCGCTCCGAGAGCGGCAGCTTCGCGCGCGGTGCGCTCGGCCTATGCCT  
GCCCCGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCCATGATAGATACGCTCAGACCCGT  
GCCCTTCGCGTTCGGAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCG  
GCTGTGCTGATGGACTGCCGGCCGCAGGAGCTATACGAGTCGTGCGACATCGAGTCGGCCATCAACGTGGCCAT  
CCCGGCATCATGCTCGGCGCCTGCAGAAGGGTAACCTGCCGTGCGCGCGCTCTTCACGCGCGGCGAGGACCG  
GGACCGCTTCACCCGGCGCTGTGGCACCGACACAGTGGTGTCTACGACGAGAGCAGCAGCGACTGGAACGAGAA  
TACGGGCGGCGAGTCGGTGTCTGGGCTGTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTCTACCTGGA  
AGGTGGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAG  
CTCGCCCGCGTTGCCAGTGTCTGGGGCTCGGGGGCTGCGGATCAGCTCTGACTCTTCTCGGACATCGAGTCTGA  
CCTTGACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCTTCCCAGT  
GGAGATCTTGCCCTTCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTCGGCAT  
CAAGTACATCTTGAACGTCAACCCCAATTTGCCGAATCTCTTTGAGAAGCGAGGAGAGTTTAAATACAAGCAAAT  
CCCCATCTCGGATCACTGGAGCCAAAACCTGTCCAGTTTTTCCCTGAGGCCATTCTTTTCATAGATGAAGCCCG  
GGGCAAGAACTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCT  
TATGCAGAAGCTCAATCTGTGATGAACGACGCCTATGACATTGTCAAAATGAAAAATCCAACATATCCCTTAA  
CTTCAACTTCATGGGTCACTGTCTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCC  
AGCACAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACGTGAAA  
GACCCACACCCCTCCTTGTCTGGAATGTGTCTGGCCCTTCAGCAGTTTCTCTTGGCAGCATCAGCTGGGCTGCTT  
TCTTTGTGTGTGGCCCCAGGTGTCAAAATGACACCAGCTGTCTGTACTAGACAAGGTACCAAGTGCGGAATTGG  
TTAATACTAACAGAGAGATTGTCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTT  
TGCTCTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCCAGGCGCATAGGGTAGAAC  
CAAATGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAGGCTGTTTCTTTTGCATCTGGAACACTGACTATA  
TAATTGTCTTCAATGAAGACTAATTCAATTTTGCATATAGAGGAGCCAAAGAGAGATTTCAGCTCTGTATTTGTG  
GTATCAGTTTGGAAAAAAATCTGATACTCCATTGATTATTGTAAATATTTGATCTTGAATCACTTGACAGTG  
TTTGTGTTGAATTGTGTTTGTCTTTTCTTTTGATGGGCTTAAAGAAATTATCCAAAGGGAGAAAGAGCAGTATGC  
CACTTCTTAAACAGAACAAAACAAAAAAGAAATTGTGCTCTTTTCTAATCCAAAGGGTATATTTGCAGCATG  
CTTGACTTTACCAATTCTGATGACATCTTTACGGACACTATTATCACTAAGACCTTGTATGGCGAAGTCTTTAG  
TCTTTTTCATGTATTTTCTCATGATTTTTTCTTTATGTAGTTTGAATATGCCTTACCTTTGTAAATATTTTT  
GCTTGTGTGTGCGCAAAGGGGATAATCTGGGAAAGACACCAATCATGGGCTCACTTTAAAA

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**FIGURE 3738**

MIDTLRPVPPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA  
LFTRGEDRDRFTRRCGTDIVVLYDESSSDWNENTGGESVLGLLLKKLKDEGCRAFYLEGGFSKFQAEFSLHCETN  
LDGSCSSSSPPLPVLGGLRISSDSSSDIESDLDRDPNSATDSGSPLSNSQPSFPVEILPFLYLGCARDSTNL  
DVLEEFGIKYILNVTPNLPNLFENAGEFKYKQIPISDHWSQNLQFFPEAISFIDEARGKNCGVLVHCLAGISRS  
VTVTVAYLMQKLNLSMNDAYDIVKMKKSNI SPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQNVYQV  
DSLQST

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**FIGURE 3739**

GTCTCTCTTCTCCCTTCCGTCATGTCTAAGTCAGAGTCTCCTAAAGAGCCCGAACAGCTGAGGAAGCTCTTCATT  
GGAGGGTTGAGCTTTAAAACAACCGATGAGAGCCTGAGGAGCCATTTTGAGCAATGGGGAACGCTCACGGACTGT  
GTGGTAATGAGAGATCCAAACACAGAGCACTCCAGGGGCTTTGGGTTTCATCACACATGCCACTGTGGAGGAGGTG  
GATGCAGCCATGAATGCAAGGCCACATAAGGTGGATGGAAGAGTTGTGGAAACCAAGAGAGCTGTCTCAAGAGAA  
GATTCTCAAAGACCAGGTGCCCACTTAAGTATGAAAAAGATATTTGTTGGTGGCATTAAACAATGAAGAACAACA  
CCTAAGAGATTATTTTGAACAGTATGGAAAAATTGAAGTGACTCAAATCATGACTCACTGAGGCAGTGCCAAGAA  
AAGGGGCTTTGCCCTTTGTAACCTTTGACGACCATGACTCCGTGGATAAGACTGTCATTTCAGAAATACCATACTGT  
GAATGGCCACAACGTGTGAAGTTAGGAAAGCCCTGTCAAAGCAAGAGATGGCTAGGGCTTTATCCAGCCAAAGAGG  
CTGAAGTGGTTCTAGAAACTTTGGCGGIGGTCGTGGAGGTGGTTTTGGCAGGAATGACAACACTGGTAGTGGAGG  
AAACTTCAGTGGTGGTGGTGGATATGGTGGCAGTGGGGATGGCTATAATGGATTGGTAATGATGGAAGCAATTT  
TGGAGGTGGTGGAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGGAGG  
AACTTTGGAGGCAGAAAGCCCTGGCCCTATGGTGGTGGAGGCCAATACTTTGCCAAACCATGAAACCAAGGTGG  
CTATGGTGGTTCCAGTAGCAGCAGTAGCTATGGCAATGGCAGAAGATTTTAATTAGGAAACAAAGCTTAGCAGGA  
GAGGAGAGCCAGAGAAGTGACAGGGAAGCTACAGGTTACAACAGATTGTGAACTCAGCCAAGCACAGTGGTGGCA  
GGGCCTAGCTGCTACAAAGAAGACCTGTTTTAGACAAATACTCATGGGTATGGGCAAAAACTCGAGGACTGTAT  
TTGTGACTAATTGTATAACAAGTCATTTTAGTTCTGTTCTGTGGAAAGTGTAAGCATTCCAACAAGGGTTTC  
AATGTAGATTTTTTTTTTTTTTTTGGCAAACATGCTGTTGATTGCTAAATGTAAGTCTGATCATGATGCAGAATAAA  
TGCTTTTTTT

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**FIGURE 3740**

TTTAACTGTGCTATGGAGTAGAAGCAGGAGGTTTTCAACCTAGTCACAGAGCAGCACCTACCCCTCCTCCTTTC  
CACACCTGCAAACCTCTTTTACTTGGGCTGAATATTTAGTGTAATTACATCTCAGCTTTGAGGGCTCCTGTGGCAA  
ATTCCCGGATTAAAAGGTTCCCTGGTTGTGAAAATACATGAGATAAATCATGAAGGCCACTATCATCTCCTTCT  
GCTTGACAAAGTTTCTGGGCTGGACCGTTTCAACAGAGAGGCTTATTTGACTTTATGCTAGAAGATGAGGCTTC  
TGGGATAGGCCCAGAAAGTTCTGTATGACCGGACTTCGAGCCCTCCCTAGGCCCAGTGTGCCCTTCCGCTGTCA  
ATGCCATCTTCGAGTGGTCCAGTGTTCTGATTTGGGCTCTGGACAAAGTGCCAAAGGATCTTCCCCCTGACACAAC  
TCTGCTAGACCTGCAAAACAACAAATAACCGAAATCAAAGATGGAGACTTTAAGAACCTGAAGAACCTTCACGC  
ATTGATCTTGTCAACAATAAAATTAGCAAAGTTAGTCCTGGAGCATTTACACCTTTGGTGAAGTTGGAACGACT  
TTATCTGTCCAAGAATCAGCTGAAGGAATTGCCAGAAAAATGCCCAAACTCTTCAGGAGCTGCGTGCCCATGA  
GAATGAGATCACCAAAGTGCAGAAAGTTACTTTCAATGGACTGAACCAGATGATTGTCATAGAACTGGGCACCAA  
TCCGCTGAAGAGCTCAGGAATTGAAAATGGGGCTTTCCAGGGAATGAAGAAGCTCTCCTACATCCGCATTGCTGA  
TACCAATATCACCAGCATTCCTCAAGGTCTTCTCCTTCCCTTACGGAATTACATCTTGATGGCAACAAAATCAG  
CAGAGTTGATGCAGCTAGCCTGAAAGGACTGAATAATTTGGCTAAGTTGGGATTGAGTTTCAACAGCATCTCTGC  
TGTTGACAATGGCTCTCTGGCCAACACGCCTCATCTGAGGGAGCTTCACTTGGACAACAACAAGCTTACCAGAGT  
ACCTGGTGGGCTGGCAGAGCATAAGTACATCCAGGTTGTCTACCTTCATAACAACAATATCTCTGTAGTTGGATC  
AAGTGACTTCTGCCCACCTGGACACAACACCAAAAAGGCTTCTTATTCGGGTGTGAGTCTTTTCAGCAACCCGGT  
CCAGTACTGGGAGATACAGCCATCCACCTTCAGATGTGTCTACGTGCGCTCTGCCATTCAACTCGGAACTATAA  
GTAATTCTCAAGAAAGCCCTCATTTTTATAACCTGGCAAAATCTTGTTAATGTCATTGCTAAAAATAAATAAAA  
GCTAGATACTGGAAACCTAACTGCAATGTGGATGTTTTACCCACATGACTTATTATGCATAAAGCCAAATTTCCA  
GTTTAAGTAATTGCCTACAATAAAAAGAAATTTGCCTGCCATTTTCAGAATCATCTTTGAAGCTTTCTGTTGA  
TGTTAACTGAGCTACTAGAGATATTCTTATTTCACTAAATGTAAATTTGGAGTAAATATATATGTCAATATTTA  
GTAAAGCTTTTCTTTTTTAATTTCCAGGAAAAATAAAAAGAGTATGAGTCTTCTGTAAATTCATTGAGCAGTTAG  
CTCATTTGAGATAAAGTCAATGCCAAACACTAGCTCTGTATTAAATCCCCATCATTACTGGTAAAGCCTCATTTG  
AATGTGTGAATTCAATACAGGCTATG

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**FIGURE 3741**

MKATIILLLLAQVSWAGPFQQRGLFDFMLEDEASGIGPEVPDDRDFEPSLGPVCPFRQCCHLRVVQCSDLGLDKV  
PKDLPPDTLLDLQNNKITEIKDGDFKNLKNLHALILVNNKISKVSPGAFTPLVKLERLYLSKNQLKELPEKMPK  
TLQELRAHENEITKVRKVTFNGLNQMIIVIELGTNPLKSSGIENGAFAQGMKKLSYIRIADTNITSIPQGLPPSLTE  
LHLDGNKISRVDAAASLKGLNNLAKLGLSFNSISAVDNGSLANTPHLRELHLDNNKLTRVPGGLAEHKYIQVVYLH  
NNNISVVGSSDFCPPGHNTKKASYSGVSLFSNPVQYWEIQPSTFRVCYVRSAILGNYK

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**FIGURE 3742**

AAAGCAGCATCTTGCCCTGGATGAGCCAGGGGACACAGAAGAGAAGCCCACTATCTCATTTAATCTTTACAACCTCT  
CTTGCAAGGGTTCCCTGGTTGTGAAAATACATGAGATAAATCATGAAGGCCACTATCATCCTCCTTCTGCTTGCA  
CAAGTTTCCTGGGCTGGACCGTTTCAACAGAGAGGCTTATTTGACTTTATGCTAGAAGATGAGGCTTCTGGGATA  
GGCCCAAGATTCCCTGATGACCGCGACTTCGAGCCCTCCCTAGGCCCACTGTGCCCTTCCGCTGTCAATGCCAT  
CTTCGAGTGGTCCAGTGTCTGATTTGGGTCTGGACAAAGTGCCAAAGGATCTTCCCCCTGACACAACCTCTGCTA  
GACCTGCAAAACAACAAAATAACCGAAATCAAAGATGGAGACTTTAAGAACCTGAAGAACCTTCACGCATTGATT  
CTTGTCACAATAAAATTAGCAAAGTTAGTCCTGGAGCATTTACACCTTTGGTGAAGTTGGAACGACTTTATCTG  
TCCAAGAATCAGCTGAAGGAATTGCCAGAAAAATGCCCAAACTCTTCAGGAGCTGCGTGCCCATGAGAATGAG  
ATCACCAAAGTGCGAAAAGTTACTTTCAATGGACTGAACCAGATGATTGTCATAGAACTGGGCACCAATCCGCTG  
AAGAGCTCAGGAATTGAAAATGGGGCTTCCAGGGAATGAAGAAGCTCTCCTACATCCGCATTGCTGATACCAAT  
ATCACCAGCATTCCTCAAGGTCTTCCCTCCTTCCCTTACGGAATTACATCTTGATGGCAACAAAATCAGCAGAGTT  
GATGCAGCTAGCCTGAAAGGACTGAATAATTTGGCTAAGTTGGGATTGAGTTTCAACAGCATCTCTGCTGTTGAC  
AATGGCTCTCTGGCCAACACGCCTCATCTGAGGGAGCTTCACTTGGACAACAACAAGCTTACCAGAGTACCTGGT  
GGGCTGGCAGAGCATAAGTACATCCAGGTTGTCTACCTTCATAACAACAATATCTCTGTAGTTGGATCAAGTGAC  
TTCTGCCCACCTGGACACAACACCAAAAAGGCTTCTTATTCGGGTGTGAGTCTTTTCAGCAACCCGGTCCAGTAC  
TGGGAGATACAGCCATCCACCTTCAGATGTGTCTACGTGCGCTCTGCCATTCAACTCGGAACTATAAGTAAATTC  
TCAAGAAAGCCCTCATTTTTATAACCTGGCAAAATCTTGTTAATGTCATTGCTAAAAATAAAATAAAGCTAGAT  
ACTGGAAACCTAAC TGCAATGTGGATGTTTTACCCACATGACTTATTATGCATAAAGCCAAATTTCCAGTTTAAG  
TAATTGCCTACAATAAAAAGAAATTTGCCTGCCATTTTCAGAATCATCTTTGAAGCTTTCTGTTGATGTTAAC  
TGAGCTACTAGAGATATTCTTATTTCACTAAATGTAAATTTGGAGTAAATATATATGTCAATATTTAGTAAAGC  
TTTTCTTTTTTAATTTCCAGGAAAAATAAAAAGAGTATGAGTCTTCTGTAATTCATTGAGCAGTTAGCTCATT  
GAGATAAAGTCAAATGCCAAACACTAGCTCTGTATTAATCCCCATCATTACTGGTAAAGCCTCATTGTAATGTG  
GAATTCAATACAGGCTATG

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**FIGURE 3743**

MKATIILLLLAQVSWAGPFQQRGLFDFMLEDEASGIGPEVPDDRDFEPSLGPVCPFRQCCHLRVVQCSDLGLDKV  
PKDLPPDTLLDLQNNKITEIKDGDFFKNLKNLHALILVNNKISKVSPGAFTPLVKLERLYLSKNQLKELPEKMPK  
TLQELRAHENEITKVRKVTFNGLNQMIIVIELGTNPLKSSGIENGAFQGMKKLSYIRIADTNITSIPQGLPPSLTE  
LHLDGNKISRVDAAASLKGLNNLAKLGLSFNSISAVDNGSLANTPHLRELHLDNNKLTRVPGGLAEHKYIQVVYLH  
NNNISVVGSSDFCPPGHNTKKASYSGVSLFSNPVQYWEIQPSTFRVCVYVRSAILQLGNYK

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**FIGURE 3744**

GTTCCCTGGTTGTGAAAATACATGAGATAAAATCATGAAGGCCACTATCATCCTCCTTCTGCTTGCACAAGTTTCC  
TGGGCTGGACCGTTTCAACAGAGAGGCTTATTTGACTTTATGCTAGAAGATGAGGCTTCTGGGATAGGCCAGAA  
GTTCTGATGACCGGACTTCGAGCCCTCCCTAGGCCAGTGTGCCCCCTCCGCTGTCAATGCCATCTTCGAGTG  
GTCCAGTGTCTGATTTGGAAGTGGGCACCAATCCGCTGAAGAGCTCAGGAATTGAAAATGGGGCTTTCAGGGA  
ATGAAGAAGCTCTCCTACATCCGCATTGCTGATACCAATATCACCAGCATTCCTCAAGGTCTTCCTCCTTCCCTT  
ACGGAATTACATCTTGATGGCAACAAAATCAGCAGAGTTGATGCAGCTAGCCTGAAAGGACTGAATAATTGGCT  
AAGTTGGGATTGAGTTTCAACAGCATCTCTGCTGTTGACAATGGCTCTCTGGCCAACACGCCTCATCTGAGGGAG  
CTTCACTTGGACAACAACAGCTTACCAGAGTACCTGGTGGGCTGGCAGAGCATAAGTACATCCAGGTGTCTAC  
CTTCATAACAACAATATCTCTGTAGTTGGATCAAGTGACTTCTGCCCACCTGGACACAACACCAAAAAGGCTTCT  
TATTCGGGTGTGAGTCTTTTCAGCAACCCGGTCCAGTACTGGGAGATACAGCCATCCACCTTCAGATGTGTCTAC  
GTGCGCTCTGCCATTCAACTCGGAAACTATAAGTAATCTCAAGAAAGCCCTCATTTTTATAACCTGGCAAAATC  
TTGTTAATGTCATTGCTAAAAAATAAATAAAAGCTAGATACTGGAAACCTAACTGCAATGTGGATGTTTACCCA  
CATGACTTATTATGCATAAAGCCAAATTTCCAGTTTAAGTAATTGCCTACAATAAAAAGAAATTTGCCTGCCAT  
TTTCAGAATCATCTTTTGAAGCTTTCGTGTTGATGTAACTGAGCTACTAGAGATATTCTTATTTCACTAAATGTA  
AAATTTGGAGTAAATATATATGTCAATATTTAGTAAAGCTTTTCTTTTAAATTTCCAGGAAAAAATAAAAGAG  
TATGAGTCTTCTGTAATTCATTGAGCAGTTAGCTCATTGAGATAAAGTCAAATGCCAAACACTAGCTCTGTATT  
AATCCCATCATTACTGGTAAAGCCTCATTTGAATGTGTGAATTCAATACAGGCTATG



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**FIGURE 3745**

MKATIILLLLAQVSWAGPFQQRGLFDFMLEDEASGIGPEVPDDRDFEPSLGPVCPFRCQCHLRVVQCSDELGTN  
PLKSSGIENGAFQGMKKLSYIRIADTNITSIPQGLPPSLTELHLDGNKISRVDAAASLKGLNNLAKLGLSFNSISA  
VDNGSLANTPHLRELHLDNNKLTRVPGGLAEHKYIQVVYLHNNNISVVGSSDFCPPGHNTKKASYSGVSLFSNPV  
QYWEIQPSTFRVCVYVRSAILGNYK

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**FIGURE 3746**

GTTCCTGGTTGTGAAAATACATGAGATAAATCATGAAGGCCACTATCATCCTCCTTCTGCTTGCACAAGTTTC  
TGGGCTGGACCGTTTCAACAGAGAGGCTTATTTGACTTTATGCTAGAAGATGAGGCTTCTGGGATAGGCCAGAA  
GTTCTGATGACCGGACTTCGAGCCCTCCCTAGGCCAGTGCCCCCTCCGCTGTCAATGCCATCTTCGAGTG  
GTCCAGTGTCTGATTTGGGTCTTCCTCCTTCCCTTACGGAATTACATCTTGATGGCAACAAAATCAGCAGAGTT  
GATGCAGCTAGCCTGAAAGGACTGAATAATTTGGCTAAGTTGGGATTGAGTTTCAACAGCATCTCTGCTGTTGAC  
AATGGCTCTCTGGCCAACACGCCTCATCTGAGGGAGCTTCACTTGGACAACAACAAGCTTACCAGAGTACCTGGT  
GGGCTGGCAGAGCATAAGTACATCCAGGTTGTCTACCTTCATAACAACAATATCTCTGTAGTTGGATCAAGTGAC  
TTCTGCCCACCTGGACACAACACCAAAAAGGCTTCTTATTCGGGTGTGAGTCTTTTCAGCAACCCGGTCCAGTAC  
TGGGAGATACAGCCATCCACCTTCAGATGTGTCTACGTGCGCTCTGCCATTCAACTCGGAAACTATAAGTAAATTC  
TCAAGAAAGCCCTCATTTTTATAACCTGGCAAAATCTTGTTAATGTCATTGCTAAAAATAAATAAAAGCTAGAT  
ACTGGAAACCTAACTGCAATGTGGATGTTTTACCCACATGACTTATTATGCATAAAGCCAAATTTCCAGTTAAG  
TAATTGCCTACAATAAAAAGAAATTTTGCTGCCATTTTCAGAATCATCTTTGAAGCTTCTGTTGATGTTAAC  
TGAGCTACTAGAGATATTCTTATTTCACTAAATGTAAAATTTGGAGTAAATATATATGCAATATTTAGTAAAGC  
TTTTCTTTTTTAATTTCCAGGAAAAATAAAAAGAGTATGAGTCTTCTGTAATTCATTGAGCAGTTAGCTCATTT  
GAGATAAAGTCAAATGCCAAACACTAGCTCTGTATTAATCCCATCATTAAGTAAAGCCTCATTGAAATGTGT  
GAATTCATACAGGCTATG

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**FIGURE 3747**

MKATIILLLLAQVSWAGPFQQRGLFDFMLEDEASGIGPEVDDRDFEPSLGPVCPFRQCCHLRVVQCSDLGLPPS  
LTELHLDGNKISRVDAAASLKGLNNLAKLGLSFNSISAVDNGSLANTPHLRELHLDNNKLTRVPGGLAEHKYIQVV  
YLHNNNISVVGSSDFCPPGHNTKKASYSGVSLFSNPVQYWEIQPSTFRCVYVRSIQLGNYK

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**FIGURE 3748**

GTTCCCTGGTTGTGAAAAATACATGAGATAAAATCATGAAGGCCACTATCATCCTCCTTCTGCTTGCACAAGTTTCC  
TGGGCTGGACCGTTTCAACAGAGAGGCTTATTTGACTTTATGCTAGAAAGATGAGGCTTCTGGGATAGGCCCAGAA  
GTTCCCTGATGACCGCGACTTCGAGCCCTCCCTAGGCCCAGTGTGCCCTTCCGCTGTCAATGCCATCTTCGAGTG  
GTCCAGTGTTCTGATTTGGGTTGTCTACCTTCATAACACAATATCTCTGTAGTTGGATCAAGTGACTTCTGCCC  
ACCTGGACACAACACCAAAAAGGCTTCTTATTCGGGTGTGAGTCTTTTCAGCAACCCGGTCCAGTACTGGGAGAT  
ACAGCCATCCACCTTCAGATGTGTCTACGTGCGCTCTGCCATTCAACTCGGAACTATAAGTAATTCTCAAGAAA  
GCCCTCATTTTTATAACCTGGCAAAATCTTGTTAATGTCATTGCTAAAAAATAAATAAAAGCTAGATACTGGAAA  
CCTAACTGCAATGTGGATGTTTTACCCACATGACTTATTATGCATAAAGCCAAATTTCCAGTTTAAGTAATTGCC  
TACAATAAAAAGAAATTTTGCCCTGCCATTTTCAGAATCATCTTTGAAGCTTTCTGTTGATGTTAACTGAGCTAC  
TAGAGATATTCTTATTTCACTAAATGTAAAATTTGGAGTAAATATATATGTCAATATTTAGTAAAGCTTTTCTTT  
TTTAATTTCCAGGAAAAAATAAAAAGAGTATGAGTCTTCTGTAATTCATTGAGCAGTTAGCTCATTGAGATAAA  
GTCAAAATGCCAAACACTAGCTCTGTATTAATCCCCATCATTACTGGTAAAGCCTCATTGAATGTGTGAATTCAA  
TACAGGCTATG

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**FIGURE 3749**

MKATIILLLLAQVSWAGPFQQRGLFDFMLEDEASGIGPEVEDDRDFEPSLGPVCPFRQCCHLRVVQCSDLGCLPS

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**FIGURE 3750**

GTTCCCTGGTTGTGAAAATACATGAGATAAAATCATGAAGGCCACTATCATCCTCCTTCTGCTTGACACAAGTTTCC  
TGGGCTGGACCGTTTCAACAGAGAGGCTTATTTGACTTTATGCTAGAAGATGAGGCTTCTGGGATAGGCCAGAA  
GTTCTGATGACCGCGACTTCGAGCCCTCCCTAGGCCAGTGCGCCCTTCCGCTGTCAATGCCATCTTCGAGTG  
GTCCAGTGTTCTGATTTGGGTCTGGACAAAGTGCCAAAGGATCTTCCCCCTGACACAACCTCTGCTAGACCTGCAA  
AACAAACAAAATAACCGAAATCAAAGATGGAGACTTTAAGAACCTGAAGAACCTTCACGTTGTCTACCTTCATAAC  
AACAAATATCTCTGTAGTTGGATCAAGTGACTTCTGCCACCTGGACACAACACCAAAAAGGCTTCTTATTCGGGT  
GTGAGTCTTTTCAGCAACCCGGTCCAGTACTGGGAGATACAGCCATCCACCTTCAGATGTGTCTACGTGCGCTCT  
GCCATTCAACTCGGAAACTATAAGTAATCTCAAGAAAGCCCTCATTTTTATAACCTGGCAAAATCTTGTTAATG  
TCATTGCTAAAAAATAAATAAAAGCTAGATACTGGAAACCTAACTGCAATGTGGATGTTTTACCCACATGACTTA  
TTATGCATAAAGCCAAATTTCCAGTTTAAGTAATTGCCTACAATAAAAAGAAATTTGCCTGCCATTTTCAGAAT  
CATCTTTTGAAGCTTTCTGTTGATGTTAACTGAGCTACTAGAGATATTCTTATTTCACTAAATGTAAAATTTGGA  
GTAAATATATATGTCAATATTTAGTAAAGCTTTTCTTTTTTAATTTCCAGGAAAAAATAAAAAGAGTATGAGTCT  
TCTGTAATTCATTGAGCAGTTAGCTCATTGAGATAAAGTCAAATGCCAAACACTAGCTCTGTATTAAATCCCAT  
CATTACTGGTAAAGCCTCATTTGAATGTGTGAATTCATACAGGCTATG

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**FIGURE 3751**

MKATIILLLLAQVSWAGPFQQRGLFDFMLEDEASGIGPEVPDDRDFEPSLGPVCPFRQCCHLRVVQCSDLGLDKV  
PKDLPPDTLLDLQNNKITEIKDGDFKNLKNLHVVYLHNNNISVVGSSDFCPPGHNTKKASYSGVSLFSNPVQYW  
EIQPSTFRVCVYVRSIQLGNYK

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**FIGURE 3752**

GTATCACTCAGAATCTGGCAGCCAGTTCCGTCCTGACAGAGTTCACAGCATATATTGGTGGATTCTTGTCATAG  
TGCATCTGCTTTAAGAATTAACGAAAGCAGTGTCAAGACAGTAAGGATTCAAACCATTTGCCAAAAATGAGTCTA  
AGTGCAATTTACTCTCTTCTGGCATTGATTGGTGGTACCAGTGGCCAGTACTATGATTATGATTTTCCCCTATCA  
ATTTATGGGCAATCATCACCAAAGTGTGCACCAGAATGTAAGTGCCTGAAAGCTACCCAAGTGCCATGTACTGT  
GATGAGCTGAAATTGAAAAGTGTACCAATGGTGCCTCCTGGAATCAAGTATCTTTACCTTAGGAATAACCAGATT  
GACCATATTGATGAAAAGGCCCTTTGAGAATGTAAGTGAATCTGAGTGGCTCATTCTAGATCACAACTTCTAGAA  
AACTCCAAGATAAAAAGGGAGAGTTTTCTCTAAATTGAAACAAGTGAAGAAGCTGCATATAAACCAACAACCTG  
ACAGAGTCTGTGGGCCCACTTCCCAAATCTCTGGAGGATCTGCAGCTTACTCATAACAAGATCACAAAGCTGGGC  
TCTTTTGAAGGATTGGTAAACCTTGACCTTCATCCATCTCCAGCACAAATCGGCTGAAAGAGGATGCTGTTTCAGCT  
GCTTTTAAAGGTCTTAAATCACTCGAATACCTTGACTTGAGCTTCAATCAGATAGCCAGACTGCCTTCTGGTCTC  
CCTGTCTCTCTTCTAACTCTCTACTTAGACAACAATAAGATCAGCAACATCCCTGATGAGTATTTCAAGCGTTTT  
AATGCATTGCAGTAICTGCGTTTTATCTCACAACGAAGTGGCTGATAGTGAATACCTGGAAATCTTTCAATGTG  
TCATCCCTGGTTGAGCTGGATCTGTCTATAACAAGCTTAAAAACATACCAACTGTCAATGAAAACCTTGAAAAAC  
TATTACCTGGAGGTCAATCAACTTGAGAAGTTTGACATAAAGAGCTTCTGCAAGATCCTGGGGCCATTATCCTAC  
TCCAAGATCAAGCATTGCGTTTGGATGGCAATCGCATCTCAGAAACCAGTCTTCCACCGGATATGTATGAATGT  
CTACGTGTTGCTAACGAAGTCACTCTTAATTAATATCTGTATCCTGGAACAATATTTTATGGTTATGTTTTCTG  
TGTGTCAGTTTTTCATAGTATCCATATTTTATTACTGTTTATTACTTCCATGAATTTTAAATCTGAGGGAATGT  
TTTGTAACATTTATTTTTTTTAAAGAAAAGATGAAAGGCAGGCCTATTTTCATCACAAGAACACACATATACA  
CGAATAGACATCAAACCAATGCTTTATTTGTAAATTTAGTGTTTTTTTTATTCTACTGTCAAATGATGTGCAAA  
ACCTTTTACTGGTTGCATGGAAATCAGCCAAGTTTTATAATCCTTAAATCTTAATGTTCTCAAAGCTTGGATTA  
AATACATATGGATGTTACTCTCTTGCACCAAATTATCTTGATACATTCAAATTTGTCTGGTTAAAAAATAGGTGG  
TAGATATTGAGGCCAAGAATATTGCAAAATACATGAAGCTTCATGCACTTAAAGAAGTATTTTGAATAAGAAT  
TTGCATACCTTACCTAGTGAACTTTTCTAGAATTATTTTCACTCTAAGTCATGTATGTTTCTCTTTGATTATTT  
GCATGTTATGTTTAATAAGCTACTAGCAAAATAAAACATAGCAAAATGAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAA



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**FIGURE 3753**

MSLSAFTLFLALIGGTSGQYYDYDFPLSIYQGSSPNCAPCNCPEYPSAMYCDELKLKSVPMVPPGIKYLYLRN  
NQIDHIDEKAFENVTDLQWLILDHNLLNSKIKGRVFSKLKQLKKLHINHNNTESVGPLEKSLEDLQLTHNKIT  
KLGSFEGLVNLTFIHLQHNRLKEDAVSAAFKGLKSLEYLDLSFNQIARLP SGLPVSLTLYLDNNKISNIPDEYF  
KRFNALQYLRRLSHNELADSGIPGNSFNVSSLVELDLSYNKLKNIPTVNENLENYYLEVNQLEKFDIKSFCKILGP  
LSYSKIKHLRLDGNRISETSLPPDMECLRVANEVTLN

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**FIGURE 3754**

GCAGAACAAAGAATACTCCACTTTTGATAGATGGGGTTACCAGGATTACAGGCTACATGGCCTGAGGCAAGGTCAC  
AACATGAGTGACAGAATGTGTCCTGGAAGCCAGGCATCCTCTGGGGTGTATTTGGGGCGCTCAACAAGGCTTGAT  
CGAGCTTTGGGGGTAGATCTAGCTATTCCATGGGGATTCTTTTCAGAATTGCTGTTTTCGGTAACTAATTCCATG  
ACCAGGTCCATGGCATTGGATGACATTGCGCTACACTGTTGCTCACCCGGGTCACCCGTCCTCACAGGTTGGATG  
GCAAGCATGTTGTGTTCCGGTCACGTCAAAGAGGGCATGGACGTCGTGAAGAAAAATAGAATCTTTCGGCTCTAAG  
AGTGGGAGGACATCCAAGAAGATTGTCATCACAGACTGTGGCCAGTTGAGCTAATCTGTGGCCAGGGTGCTGGC  
ATGGTGGCAGCTGCAAATGTCCATGCACCCAGGTGGCCCGCGTTGGGCTGTCAGCCAAGGTGCCGAAACGATAC  
GTGTGCCCCACTCCACTGTCACAGTGTGCCTGAGGAAGGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCAC  
ATTGCTTCCTAATACCCACCCTTCCTCACGACCTCATTCTGGGCATCTTTGTGGACATGATGTCACCCACCCCT  
TGTCAGCATTGCCTGTGATTGCCAGCCCAGATTCATCTGIGCCTTGGACATGGTGATGGTGATGGGTGCCAT  
CCAAGTGAAAGTCTTTTCTTGACCAAGGGGGACAGTCAGTTTTGCAAAGGACTCTAATACCTGTTTAATATTG  
TCTTCCIAATTGGGATAATTTAATTAACAAGATTGACTAGAAGTGAACTGCAACACTAACTTCCCCGTGCTGTG  
GTGTGACCTGAGTTGGTGACACAGGCCACAGACCCAGAGCTTGGCTTTTGAAACACAACCTCAGGGCTTTTGTA  
AGGTTCCCCCGCTGAGATCTTTCCTCCTGGTTACTGTGAAGCCTGTTGGTTTGCTGCTGTCGTTTTGAGGAGGG  
CCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAACCTCACTTGAGCTGTGCCTAGACAATGTGAATTCCTGTG  
TTGCTAACAGAAGTGGCCTGTAAGCTCCTGTGCTCCGGAGGGAAGCATTTCCTGGTAGGCTTTGATTTTCTGTG  
TGTTAAAGAAATTCAATCTACTCATGATGTGTTATGCATAAAACATTTCCTGGAACATGGATTGTGTTACCTTA  
AATGTGAAAATAAATCCTATTTTCTATGG

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**FIGURE 3755**

GGATTGAAACAAGATGGCGGGTTTCGTGGTGAGAAGCCGTCAAGGAGTAGAAAATTGGTATGCTTAGAAGCAGATTCT  
TAAAAGCAGTTTCTCTTCAGAACATCTTTTTTTCATACCACTTGATAAGCATCTTGAAACACCATGGCTGTAGCTG  
CAGTAAAATGGGTGATGTCAAAGAGAACTATCTTGAAACATTTATTTCCAGTCCAAAATGGAGCTTTATATTGTG  
TTTGTCAATAATCTACGTATTCTCCTCTACCAGATGACTATAATTGCAACGTAGAGCTTGCTCTGACTTCTGATG  
GCAGGACAATAGTATGCTACCACCCTTCTGTGGACATTCCATATGAACACACAAAACCTATCCCTCGGCCAGATC  
CTGTGCATAATAATGAAGAAACACATGATCAAGTGCTGAAAACCAGATTGGAAGAAAAAGTTGAACACCTTGAGG  
AAGGACCTATGATAGAACAACCTTAGCAAAATGTTCTTTACTACTAAGCACCGTTGGTATCCTCATGGACGGTATC  
ACAGATGTCGTAAGAATCTGAATCCTCCAAAAGACAGATGATGCGGAGGTTCTTGGGGGAATCAAAGAGAAATGT  
GCCTCATTTGCCATTTGAGAAAATGCAGTCTGGTGTATTTCAGTAATATATAGTAAAGTAATAATGATAAAATATC  
TTTTCATATATTAGAATGTGTACTTTTATATAAAGTAATTCTGGATTGACATTCTCATTTAGAGAAACCTATTT  
TCTTTTTTCTTTTTCTATTTTAGTGTTTCATTTATGTGCGGTCTCCAATTTAGGACTTTTCCATAGTGCCAAAGC  
CATAATATTTCAGTAGAACATCAATAAATTACATCAGAAATTCAACACTTTATTATAAAACGGGCTTCGTGTTAG  
ATAATTTTGCTAAACAGTAGGCTACTGTAAGTGTTCTGAGCATATTTAAGACAGGCTAGCATTTTCAATTTACAA  
TATTTTCAACTGATAGTAGGTTTATTGGGATGTAACCCTATGATAAGTTGAGAAACATCTCTTTTTGTGTGCTA  
CTGTGATTTAAGTATTTTAAATCATCAGCCAAGCATTGTTAGTAGTATAAATATGATTAATAAAAAATGTGCATGG  
CTTTCCT

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**FIGURE 3756**

MAVAAVKWMSKRTILKHLFPVQNGALYCVCHKSTYSPLPDDYN CNVELALTS DGRTIVCYHPSVDIPYEHTKPI  
PRPDPVHNNEETHDQVLKTRLEEKVEHLEEGPMIEQLSKMFFTTKHRWYPHGRYHRCRKNLNPPKDR

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## FIGURE 3757

AGCCGCGGCCTCAACTAAAAGTGGCCATTGACCTTTCAAGCTTTTCGAGCAGTGATGCAATAGAATAGTATTTCAA  
AGAAAAATGCTTATCGAAATTTTGGATCCGGTTTTCCCGTGATTGTTAAGGGTTTCTTTTAAAAAGTAGGTCACA  
TTTCAAGTAGGTCATATTTTCGGGGCGGGTGCGCAGACAAGGAGATGAGTTTCCACTAAGGCCAGGGGGCCTCCA  
ACGGGGTTGGAGGTGAGAATCCAGGTAGGGTAGAGGTGCCGAGATCCTTCCGAATCCCAGCCCTGGGGCGTCAG  
CCCTGCAGGGAATGGCAGAGACACTCTCCGGACTGAGGGAACCGAGGCCAGTCACCAAGCCCCTTCCGGGCGCGC  
AGGCGATCAGTGGGTGACCGCGGCTGCGAGGGACTTTGTTCATCCGTCTCCAGGATCTGGGGAGAAAGAGCCCCA  
TCCCTTCTCTCTGCCACCATTTCGGACACCCCGCAGGGACTCGTTTTGGGATTGCGACTGACTTCAAGGAAGG  
ACGCGAACCCCTTCTCTGACCCCAGCTCGGGCGGGCCACCTGTCTTTGCCGCGGTGACCCCTTCTCTCATGACCCCTGC  
GGTGCCCTTGAGCCCTCCGGGAATGGCGGGGAAGGGACGCGGAGCCAGTGGGGGACCGCGGGGTGGCGGAGGAGC  
CATCCCCGCGAGGCGCGCGTCTGGCGAAGGCCCTGCGGGAGCTCGGTGAGACAGGATGGTACTGGGGAAGTATGA  
CTGTTAATGAAGCCAAAGAGAAATTAAAAGAGGCCACCAGAAGGAACCTTTCTTGATTAGAGATAGCTCGCATTGAG  
ACTACCTACTAACAATATCTGTGTTAAAACATCAGCTGGACCAACTAATCTTCGAATCGAATACCAAGACGGAAAAT  
TCAGATTGGACTCTATCATATGTGTCAAATCCAAGCTTAAACAATTTGACAGTGTGGTTCATCTGATCGACTACT  
ATGTTTCAGATGTGCAAGGATAAGCGGACAGGTCCAGAAGCCCCCGGAACGGCACTGTTTACCTTTATCTGACCA  
AACCGCTCTACACGTGAGCACCATCTCTGAGCATCTCTGTAGGCTCACCATTAAACAATGTACCGGTGCCATCT  
GGGGACTGCCCTTTACCAACAAGACTAAAAGATTACTTGGAAGAATATAAATTCAGGTATTAATGTTTCTCTTTT  
TTTAAACATGTCTCACATAGAGTATCTCCGAATGCAGCTATGTAAAAGAGAACCAAAACCTTGAGTGCTCTGGATA  
ACTATATGGAATGCTTTCTAAGAACAGCTGAAGCTAATCTAATTTAAATTTAACAGCTTGAAGAGGTAGCTAGGT  
GTTTAAAGTTTCTCCAGATACTTTTACCTGAGTGATGCTTCCCTTCCTAAGGCTGACCAAGACCTGTGATCCTT  
TTAGATTAAAAATAAAATGTGCGATGTAAAGGCTGAAGTCGCGTTTTATCAGAATGCCTTGCCTTCTTAGGTTCT  
TTTCCATTATGTCAAAGGTCCAGGCTCCAGTAGGAGAGAAAGAACTCCTCATAGGAATACTGAAGAAGTGGGAAG  
GAACCAAGCTGACACAGGCTCACTGCAATTTGATATGCCTGCTGATCAGAGTCTCTTGGGCATTTTATATTTTG  
CATTCTGATGTACCTAGGAGTTTTGTAAACAGATGATGTATGTGAGTATTTATCCCATTTTATGCAATTAACCA  
AATCAACCAAAAAAAGTGACCATGAAGTCCTGTATTTGTCTTTTACTACATGTAGGAACCTCTCATGTGAATGAG  
TACTGTAGTAATCCATTCTATGGGAGCCTTATTTAGAAATATTTCAAACCTGGTGCAATGGAAAAGACTTTCTC  
TTTTCTTTAAAGCTAAAGACAAGAATATCATGCTATACAGGTGCAACTCAATCCCGTTAATAAAAAACCAATGT  
AGGTATAGGCATTCTACCCTTTGAAATAGCTGTGTCCCAACCTGTTGCCATTGATTTTTTGGAATGGCTTTAGA  
AATATCCAAGTTGTCTTGAATTGTCTAACCATGGACATAAACAGTTGTCTCCCTTCTACTGTGTAGAACTTT  
GACTTAATTTTCTTCCAGATACAGGGGATACCTGCCTGTTTTTCAAAGTGTTTTATTACTGCTGTTACTATTTG  
ATTAGAATGTATTAATAAAAAAACCTGATTTCT

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**FIGURE 3758**

MTLRCLPSGNGGEGTRSQWGTAGSAEESPQAARLAKALRELGQTGWYWSMTVNEAKEKLKEAPEGTFLIRDS  
SHSDYLLTISVKTSAGPTNLRIEYQDGKFRLDSIICVKSCLKQFDSVVHLIDYYVQMCKDKRTGPEAPRNGTVHL  
YLTkPLYTSAPSLQHLCRLTINKCTGAIWGLPLPTRLKDYLEEYKFQV

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**FIGURE 3759**

GGTGCCGCATCCCCAGCCCGCCGCCATGGCCGCCTACAACTGGTGCTGATCCGGCACGGCGAGAGCGCATGGAA  
CCTGGAGAACCCTTCAGCGGCTGGTACGACGCCGACCTGAGCCCGGGGCCACGAGGAGCGAAGCGCGGCGG  
GCAGGCGCTACGAGATGCTGGCTATGAGTTTGACATCTGCTTCACCTCAGTGCAGAAGAGAGCGATCCGGACCCT  
CTGGACAGTGCTAGATGCCATTGATCAGATGTGGCTGCCAGTGGTGAGGACTTGGCGCCTCAATGAGCGGCACTA  
TGGGGGTCTAACCGGTCTCAATAAAGCAGAACTGCTGCAAAGCATGGTGAGGCCAGGTGAAGATCTGGAGGCG  
CTCCTATGATGTCCCACCACCTCCGATGGAGCCCGACCATCCTTTCTACAGCAACATCAGTAAGGATCGTAGGTA  
TGCAGACCTCACAGAAGATCAGCTACCCTCCTGTGAGAGTCTGAAGGATACTATTGCCAGAGCTCTGCCCTTCTG  
GAATGAAGAAATAGTTCCCCAGATCAAGGAGGGGAAACGTGTACTGATTGCAGCCCATGGCAACAGCCTCCGGGG  
CATTGTCAAGCATCTGGAGGGTCTCTCTGAAGAGGCTATCATGGAGCTGAACCTGCCGACTGGTATTCCCATTGT  
CTATGAATTGGACAAGAAGTTGAAGCCTATCAAGCCCATGCAGTTTCTGGGGGATGAAGAGACGGTGCACAAAGC  
CATGGAAGCTGTGGCTGCCAGGGCAAGGCCAAGAAGTGAAGGCCGGCGGGGAGGATACTGTCCCCAGGAGCACC  
CTCCCTGCCCGTCTTGTCCCTCTGCCCTCCCCACCTGCACATGTCACACTGACCACATCTGTAGACATCTTGAGT  
TGTAAGCTGCAGATGGGGACCAAGTGGCTCCCATTTTCATTTTAGCCATTTTGTCCCTGCACCCACTCCCTTCATA  
CAATCTAGTCAGAATAGCAGTTCTAGAGCACAGGTTCTCAGTCTAAGCTATGGAAAAGCTCCCCTTATCCAACAG  
AGTTTAAAGTAGTGACTTGGGTTTTTGCAGAGTGCTTTGTTTACTAAGGACTTTGGGGAGGAACCATGCTAAGCC  
ATGACCAGTGAGGAGAAGCAACAGAGCCTGTCTGTCCCATGAGCGGAGTCTGTCTCTGCTCTTCTGCAGTCAG  
GCCACTGCCTACTGCCTGGGGGCTCTAGTCATTCCAGTGGAAGACGAATGTAACCTGCGTGGTGATGTGACAAC  
GTTTCCTCCCTGACCCAGAGGATCTGGCTCTAGGTGGGATCAATCCTGAATTCGTTATGTGTTAATTTACTT  
TTATTAAAAAGTATAGTATATATAAATAATACAAAACAATAACCCCTTCTGGGGTTTCTGTGGCGGTTGAAATA  
GTCCACATGTGGTCATCAGAAAATAAGCCATTCTCATACCAATATAGGATCAGCTCCTTGACCTCTGAGGGGC  
AGGAGTGCTTCTGGTGTGTGATTAGAAATCCCTTCTGCCTTGTTCATGGCAGTGAAATGCCTCTTGGTCCTG  
TCCAAGTGATCTTTCACTGATTTCTGAATCATGTTCTAGTTGCTTGACCCTGCCACATGGGTCCAGTGTTTCATC  
TGAGCATAACTGTACTAAATCCTTTTTCCATATCAGTATAATAAAGGAGTGATGTGCAA

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**FIGURE 3760**

MAAYKLVLIRHGESAWNLENRFSGWYDADLSPAGHEEAKRGGQALRDAGYEFDICFTSVQKRAIRTLWTVLDAID  
QMWLPVVRTWRLNERHYGGLTGLNKAETAAKHGAEQVKIWRRSYDVPPPPMEPDHPPFYSNISKDRRYADLTEDQL  
PSCESLKDTIARALPFWNEEIVPQIKEGKRVLIAAHGNSLRGIVKHLEGLSEEAIMELNLPTGIPIVYELDKNLK  
PIKPMQFLGDEETVRKAMEAVAAQGKAKK



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**FIGURE 3761**

GGCCATTTCTCTTGAAACTGCGGCTCGGGACCTGCGGTACCTGCTGTAGTCACGAGGGACGGGCGGCCTGGT  
CGGCAGAGAGTAGCCTGCAACATTTCGGCCGTGXXXXXXXXXAGTTTACCCCTCAATCCCAAACCTTTCCTCAATG  
GACTAACAGGAAAGCCAGTGATGGTGAACTTAAGTGGGGAATGGAGTACAAGGGCTATCTGGTATCTGTAGATG  
GCTACATGAACATGCAGCTTGCAAATACAGAAGAATACATAGATGGAGCTTTGTCTGGACATCTGGGTGAAGTTT  
TAATAAGGTGTAATAATGTCCTTTATATCAGAGGTGTGGAAGAAGAGGAAGAAGATGGGGAAATGAGAGAATAGC  
ATCTTTTGTGGGGGATTTTTTTTATATATATTTCTAGACAATAAAGATTGTTTGTTCCTCAACTG

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**FIGURE 3762**

XSLPLNPKPFLNGLTGKPVMMVKLKWGMEYKGYLVSDGYMNMQLANTEEYIDGALSGHLGEVLIRCNNVLYIRGV  
EEEEEDGEEMRE

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**FIGURE 3763**

CTCTATCGACGAGTCTGGTAGCTGAGCGTTGGGCTGTAGGTGCTGTGCTGTGTGATCCCCCAGAGCCATGCCCCG  
AGATAGTGGATACCTGTTGCTTGGCCTCTCCGGCTTCCGTCTGCCGGACCAAGCACCTGCACCTGCGCTGCAGCG  
TCGACTTTACTCGCCGGACGCTGACCGGGACTGCTGCTCTCACGGTCCAGTCTCAGGAGGACAATCTGCGCAGCC  
TGGTTTTGGATACAAAGGACCTTACAATAGAAAAAGTAGTGATCAATGGACAAGAAGTCAAATATGCTCTTGGAG  
AAAGACAAAGTTACAAGGATCGCCAAATGGAATCTCTCTTCTATCGCTTTGAGCAAAAATCAAGAAATTGTTA  
TAGAAATTTCTTTTGGAGCTCTCCAAATCTTCTGCTCTCCAGTGGCTCACTCCTGAACAGACTTCTGGGAAGG  
AACACCCATATCTCTTTAGTCAGTGCCAGGCCATCCACTGCAGAGCAATCCTTCTTGTGTCAGGACACTCCTTCTG  
TGAAATTAACCTATACTGCAGAGGTGTCTGTCCCTAAAGAACTGGTGGCACTTATGAGTGCTATTTCGTGATGGAG  
AAACACCTGACCCAGAAGACCCAAGCAGGAAAATATACAAATTCATCCAAAAGTTCCAATACCCTGCTACCTGA  
TTGCTTTAGTTGTTGGAGCTTTAGAAAGCAGGCAAATTTGGCCCAAGAACTTTGGTGTGGTCTGAGAAAGAGCAGG  
TGGAAAAGTCTGCTTATGAGTTTTCTGAGACTGAATCTATGCTTAAATAGCAGAAGATCTGGGAGGACCGTATG  
TATGGGGACAGTATGACCTATTGGTCTGCCACCATCCTTCCCTTATGGTGGCATGGAGAATCCTTGCCTTACTT  
TTGTAACCTCTACTCTACTGGCAGGCGACAAGTCACTCCTCAATGTCTATGTCACATGAAATATCTCATAGCTGGA  
CAGGGAATCTAGTGACCAACAAAACCTTGGGATCACTTTTGGTTAAATGAGGGACATACTGTGTACTTGGAAACGCC  
ACATTTGCGGACGATTGTTTGGTGAAAAGTTCAGACATTTTAAATGCTCTGGGAGGATGGGGAGAACTACAGAATT  
CGGTAAAGACATTTGGGGAGACACATCCTTTACCAAACTTGTGGTTGATCTGACAGATATAGACCCTGATGTAG  
CTTATTCTTCAGTTCCCTATGAGAAGGGCTTTGCTTTACTTTTTTACCTTGAACAACTGCTTGGAGGACCAGAGA  
TTTTCTTAGGATTCTTAAAAGCTTATGTTGAGAAGTTTTCTTATAAGAGCATAACTACTGATGACTGGAAGGATT  
TCCTGTATTCTTATTTTTAAAGATAAGGTTGATGTTCTCAATCAAGTTGATTGGAATGCCTGGCTCTACTCTCCTG  
GACTGCCCTCCCATAAAGCCCAATTATGATATGACTCTGACAAATGCTTGTATTGCCTTAAGTCAAAGATGGATTA  
CTGCCAAAGAAGATGATTTAAATTCATTCAATGCCACAGACCTGAAGGATCTCTCTTCTCATCAATTGAATGAGT  
TTTTAGCACAGACGCTCCAGAGGGCACCTCTTCCATTGGGGCACATAAAGCGAATGCAAGAGGTGTACAACTTCA  
ATGCCATTAAACAATTCTGAAATACGATTAGATGGCTGCGGCTCTGCATTCAATCCAAGTGGGAGGACGCAATTC  
CTTTGGCGCTAAAGATGGCAACTGAACAAGGAAGAATGAAGTTTACCGGCCCTTATTCAAGGATCTTGCTGCCT  
TTGACAAATCCCATGATCAAGCTGTCCGAACCTACCAAGAGCACAAAGCAAGCATGCATCCCGTACTGCAATGC  
TGGTGGGGAAGACTTAAAAGTGGATTAAAGACCTGCGTATTGATGATTTTAGAGATTCTCTTTTTTAAATGGA  
ATTGTAAGAAATATAAACTTCAGCTCACAATTAAAACCTGTCTTTTAGTTTTGGCTTTTTATTGTTTTGTTG  
GTGATTTTACTGAAATAAAGATGAGCTACTTCTTC

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**FIGURE 3764**

MPEIVDTCSLASPASVCRTKHLHLRCSVDFTTRRTLTGTAALTVQSQEDNLRSLVLDTKDLTIEKV VINGQEVKYA  
LGERQSYKGS PMEISLP IALSKNQEIVIEISFETSPKSSALQWLTPEQTSGKEHPYLF SQCQAIHCRAILPCQDT  
PSVKLTYTAEVSVPKELVALMSAIRDGETPD PEDPSRKIYKFIQKVPIPCYLIALVVGALESRQIGPRTLWSEK  
EQVEKSAYEFSETESMLKIAEDLGGPYVWGQYDLLVLPFSFPYGGMENPCLTFVTPTLLAGDKSLSNVIAHEISH  
SWTGNLVTNKTWDHFWLNEGHTVYLERHICGR LFGEKFRHFNALGGWGELQNSVKTFGETHPFTKL VVDLTDIDP  
DVAYSSVPYEKG FALLFYLEQLLGGPEIFLGFLKAYVEKFSYKSITDDWKDFLYSYFKDKVDVLNQVDWNAWLY  
SPGLPPIKPNYDMILTNACIALSQRWITAKEDDLNSFNATDLKDLSSHQLNEFLAQT LQRAPLP LGHIKRMQEVY  
NFNAINNSEIRFRWLRLCIQSKWEDAIP LALKMATEQGRMKFTRPLFKDLAAFDKSHDQAVRTYQEHKASMPVT  
AMLVGKDLKVD

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**FIGURE 3765**

GCAACCTTTCCAAGGGAGTGGTTGTGTGATCGCCATCTTAGGGAAAAGATGTTCTCGTCCGTGGCGCACCTGGCG  
CGGGCGAACCCCTTCAACACGCCACATCTGCAGCTGGTGCACGATGGTCTCGGGGACCTCCGCAGCAGCTCCCCA  
GGGCCCACGGGCCAGCCCCGCCGCCCTCGCAACCTGGCAGCCGCCGCCGTGGAAGAGTACAGTTGTGAATTTGGC  
TCCGCGAAGTATTATGCACTGTGTGGCTTTGGTGGGGTCTTAAGTTGTGGTCTGACACACACTGCTGTGGTTCCC  
CTGGATTTAGTGAAATGCCGTATGCAGGTGGACCCCCAAAAGTACAAGGGCATATTTAACGGATTCTCAGTTACA  
CTTAAAGAGGATGGTGTTCGTGGTTTGGCTAAAGGATGGGCTCCGACTTTCCTTGGCTACTCCATGCAGGGACTC  
TGCAAGTTTGGCTTTTATGAAGTCTTTAAAGTCTTGTATAGCAATATGCTTGGAGAGGAGAATACTTATCTCTGG  
CGCACATCACTATATTTGGCTGCCTCTGCCAGTGCTGAATTCTTTGCTGACATTGCCCTGGCTCCTATGGAAGCT  
GCTAAGGTTCTGAATTCAAACCCAGCCAGGTTATGCCAACACTTTGAGGGATGCAGCTCCCCAAATGTATAAGGAA  
GAAGGCCTAAAAGCATTCTACAAGGGGGTTGCTCCTCTCTGGATGAGACAGATACCATAACCATGATGAAGTTC  
GCCTGCTTTGAACGTACTGTTGAAGCACTGTACAAGTTTGTGGTTCCTAAGCCCCGCAGTGAATGTTCAAAGCCA  
GAGCAGCTGGTTGTAACATTTGTAGCAGGTTACATAGCTGGAGTCTTTGTGCAATTGTTTCTCACCCTGCTGAT  
TCTGTGGTATCTGTGTTGAATAAAGAAAAAGGTAGCAGTGCTTCTCTGGTCTCAAGAGACTTGGATTTAAAGGT  
GTATGGAAGGGACTGTTTGGCCGTATCATCATGATTGGTACCCTGACTGCACTACAGTGGTTTATCTATGACTCC  
GTGAAGGTCTACTTCAGACTTCCTCGCCCTCCTCCACCCGAGATGCCAGAGTCTCTGAAGAAGAAGCTTGGGTTA  
ACTCAGTAGTTAGATCAAAGCAAATGTGGACTGAATCTGCTTGTGATCAGTGTGGAAGAAAGTGCAAAAGGAAC  
TTTTATATATTTGACAGTGTAGGAAATTGTCTATTCCTGATATAATTACTGTAGTACTCTTGCTTAAGGCAAGAG  
TTTCAGATTTACTGTTGAAATAAACCCAACTCTTCATG

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**FIGURE 3766**

GCACACTGAAGAGTACGTCTTCGGGTCTACCCCTAATCACATAATGGCTGTGTTTAATCAGAAGTCTGTCTCGGA  
TATGATTAAAGAGTTTCGAAAAAATTGGCGTGCTCTTTGTAACCTCTGAGAGAACCACTCTATGTGGTGCAGACTC  
CATGCTCTTGGCATTGCAGCTTTCTATGGCGGAGAACAAACAGTGGAGAATTTACAGTCTCTCTCAGTGATG  
TTTTATTGACATGGAAATACCTTGCTCCATGAGAAATTGAACTTACCAGTTGAAAACATGGACGTGACTGACCATT  
ATGAGGACGTTAGGAAGATTTATGATGATTTCTTGAAGAACAGTAATATGTTAGATCTGATTGATGTTTATCAA  
AATGTAGGGCTTTGACTTCTAATTGTGAAAATTATAACACAGTATCTCCTAGTCAACTACTGGATTTTCTGTCTG  
GCAACAGTATGCAGTAGGTGATGAACTGATCTTTCTATACCAACATCACCACAAGTAAATACAACCGTGATA  
ATGAAAAGGTGCAGCTGCTAGCAAGGAAAATTATCTTTTCATATTTAAATCTGCTAGTGAATTCAAAGAATGACC  
TGCTGTGGCTTATATTCTCAATATTCCTGATAGAGGACTAGGAAGAGAAGCCTTCACTGATTTGAAACATGCTG  
CTCGAGAGAAACAAATGTCTATCTTTTGGTGGCCAGCTCTTTTATTAGAACAATAGAGCTTGGAGGGAAAGGAT  
ATGCACCACCACCATCAGATCCTTTAAGGACACATGTAAAGGGATTGTCTAATTTTATTAATTTTCATTGACAAAT  
TAGATGAGATTTCTGGAGAAATACCAAAACCAAGCATTGCAGGGGGTCAAATACTGTCAAGTATAAAGATGCAAC  
TGATTAAAGGCCAAAACAGCAGGGATCCTTTTTGCAAAGCAATAGAGGAAGTTGCTCAGGATTTGGATTTGAGGA  
TTAAAAATATTATCAATTCTCAAGAAGGTGTTGTAGCTCTTAGCACCACTGACATCAGTCTGCTCGGCCAAAAT  
CTCATGCCATAAACCATGGTACTGCATACTGTGGCAGAGATACTGTGAAAGCCTTATTAGTTCTTTTGGACGAAG  
AAGCAGCTAATGCTCCTACCAAAAACAAAGCAGAGCTTTTATATGATGAGGAAAACACAATCCATCATCATGGAA  
CGTCTATTCTTACACTTTTTAGGTCTCCACACAGGTGAATAATTCGATAAAACCCCTAAGAGAACGCATCTGTG  
TGTCATGCAAGAGAAAAAATTAAGATGAAGCAAACTTAATTAGATCCCAATTTGCTTGTACTTATAAAGATG  
ACTACATGATAAGCAAGGATAATTGGAATAATGTTAATTTAGCATCAAAGCCTTTGTGTGTTCTTTACATGGAAA  
ATGACCTTTCTGAGGGTGTAATCCATCTGTTGGAAGATCAACAATTGGAACGAGTTTTGGAAATGTTTCATCTGG  
ACAGAAGTAAAAATGAAAAAGTATCAAGAAAATCAACCAGTCAGACAGGAAATAAAAGCTCAAAAAGGAAACAGG  
TGGATTTGGATGGTGAAAAATATTCTCTGTGATAATAGAAATGAACCACCTCAACATAAAAAATGCTAAAAATACCTA  
AGAAATCAAATGATTCACAGAATAGATTGTACGGCAAACCTAGCTAAAGTAGCAAAAAGTAATAAATGTACTGCCA  
AGGACAAGTTGATTTCTGGCCAGGCAAAGTTAACTCAGTTTTTTAGACTATAAATTTGTGTCTTATATGCTTTAG  
GTTTATGTATCTATAAACCATTCACCAAAGACATGCTTAATTTTAAAGAGATCAAGGTGTAAATTATGATGATTT  
ATTATTTTGGTCTACAGTGTATGTAAGGTTAGTATGTTAAGCACTGTTTTTGACTTTTTTAAAAATACCTTAGATG  
CAAATTTATAGGAGAAAAACACTTTTCAAGATAAGAGGTGTTTGGCTGGGATGGAAGAACTACCTGGCATGTAAGAA  
ATATCGTCAGTCGTCCTAATGCATATTGTGACTGTTTGCATATACTTCTGTTTATAAAAGTATCAGTTTTACTTT  
TCAGAGGATTTGTAAGAATCATTTAAATTTTCATTGAAATAACGACAAGTCACATTG

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**FIGURE 3767**

ATGGCAAGCCAAGCGTTTAGAAAGTTTCTTCCACTCCTTGACCGAGTTTGGTTGAAAGGCGTGCTGCTGAAACT  
GTAACCAAAGGAGGCATTATGCTTCCAGAAAAATCTCAAGGAAAATTATTGCAAGCAAGAGGTAGAGAGATTCAA  
CCAGTTAGCGTGAAAGTTGGAGATAAAGTTCTTCTCCAGAAATATGGAGGCACCAAAGTAGTTCTAGATGACAAG  
GATTATTCCTATTTAGAGATGGTGACATTCTTAGAAAGTACGTAGACTTGA

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**FIGURE 3768**

MASQAFRKFLPLLDRLVERRAAETVTKGGIMLPEKSQ GKLLQARGREIQPVSVKVGDKVLLPEYGGTKVVLDDK  
DYFLFRDGDILRKYVD



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**FIGURE 3769**

CCGAGACCCGGCGCAAGAGAGCGCAGCCTTAGTAGGAGAGGAACGCGAGACGCGGCAGAGCGGTTTCAAGCACTGA  
CTTTTGCTGCTGCTTCTGCTTTTTTTTTTCTTAGAAACAAGAAGGCCAGCGGCAGCCTCACACGCGAGCGCCA  
CGCGAGGCTCCCGAAGCCAACCCGCGAAGGGAGGAGGGGAGGGAGGAGGCGGCGTGCAGGGAGGAGAAAAAG  
CATTTTCACTTTTTTGTCTCCCACTCTAAGAAGTCTCCCGGGGATTTTGTATATATTTTTTAACTTCCGTCAAGG  
CTCCCGCTTCATATTTCTTTTCTTTCCCTCTCTGTTCTGTCACCCAAGTTCTCTCTGTGTCCCCCTCGCGGGCC  
CCGCACCTCGCGTCCCGGATCGCTCTGATTCCGCGACTCCTTGGCCGCGCTGCGCATGGAAGCTCTGCCAAGA  
TGGAGAGCGGCGCGCCGGCCAGCAGCCCCAGCCGAGCCCCAGCAGCCCTTCTGCGCCCGCAGCCTGTTTCT  
TTGCCACGCGCGCAGCCGCGCGGGCCGAGCCGCCGAGCGCGCAGCGCAGAGCGCGCAGCAGCAGCAGCAGCAGC  
AGCAGCAGCAGCAGCAGCGCGCCGAGCTGAGACCGCGCGCCGAGCGCCAGCCCTCAGGGGGCGGTACAAAGTCAG  
CGCCCAAGCAAGTCAAGCGACAGCGCTCGTCTTCGCCCCAAGTATGCGCTGCAAACGCGCGCTCAACTTCAGCG  
GCTTTGGCTACAGCCTGCCGAGCAGCAGCCGCGCCGCTGGCGCGCCGCAACGAGCGCGAGCGCAACCGCGTCA  
AGTTGGTCAACCTGGGCTTTGCCACCCTTCGGGAGCAGTCCCCAACGGCGCGGCCAACAAGAAGATGAGTAAGG  
TGGAGACACTGCGCTCGGCGGTGAGTACATCCGCGCGCTGCAGCAGCTGCTGGACGAGCATGACGCGGTGAGCG  
CCGCCCTTCAGGCAGGCGTCTGTGCGCCACCCTCTCCCCAACTACTCCAACGACTTGAATCCATGGCCGGCT  
CGCCGGTCTCATCCTACTCGTCCGACGAGGGCTCTTACGACCCGCTCAGCCCCGAGGAGCAGGAGCTTCTCGACT  
TCACCAACTGGTTCTGAGGGGCTCGGCCTGGTCAGGCTCTGGTGCGAATGGACTTTGGAAGCAGGGTGATCGCAC  
AACCTGCATCTTTAGTGCTTTCTTGTCAGTGGCGTTGGGAGGGGAGAAAAGGAAAAGAAAAAAGAAAGAAAG  
AAGAAGAAAAGAGAAGAAGAAAAAACGAAAACAGTCAACCAACCCCATCGCCAATAAGCGAGGCATGCCTGAG  
AGACATGGCTTTCAGAAAACGGGAAGCGCTCAGAACAGTATCTTTGCACTCCAATCATTACGGAGATATGAAGA  
GCAACTGGGACCTGAGTCAATGCGCAAAATGCAGCTTGTGTGCAAAAGCAGTGGGCTCCTGGCAGAAGGGAGCAG  
CACACGCGTTATAGTAACCTCCCATCACCTCTAACACGCACAGCTGAAAGTTCTTGCTCGGGTCCCTTCACCTCCT  
CGCCCTTTCTTAAAGTGCAGTTCTTAGCCCTCTAGAAACGAGTTGGTGTCTTTC

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**FIGURE 3770**

MESSAKMESGGAGQQPQPQPQQPFLPPAACFFATAAAAAAAAAAAAAQSAQQQQQQQQQQQAPQLRPAADGQPS  
GGGHKSAPKQVKRQRSSPELMRCKRRLNFSGFGYSLPQQQPAAVARRNERERNRVKLVNLGFATLREHVPNGAA  
NKKMSKVETLRSAYEYIRALQQLLDEHDAVSAAFQAGVLSPTISPNYSNDLNSMAGSPVSSYSDEGSYDPLSPE  
EQELLDFTNWF

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**FIGURE 3771A**

GGTCGAGTCCTGAAGGAGGGCCTGATGTCTTCATCATTCTCAAATTCTTGTAAGCTCTGCGTCGGGTGAAACCAG  
ACAAAGCCGCGAGCCCAGGGATGGGAGCACGCGGGGACGGCCTGCCGGCGGGGACGACAGCATTGCGCCTGGGT  
GCAGCAGTGTGCGTCTCGGGGAAGGGAAGATATTTAAGGCGTGTCTGAGCAGACGGGGAGGCTTTTCCAAACCC  
AGGCAGCTTCGTGGCGTGTGCGGTTTCGACCCGGTCACACAAAGCTTCAGCATGTCTGAGGACGGTCGGGCC  
CTGGAAGGAACGCTCTCGGAATTGGCCGCGGAAACCGATCTGCCCGTTGTGTTTGTGAAACAGAGAAAGATAGGC  
GGCCATGGTCCAACCTTGAAGGCTTATCAGGAGGGCAGACTTCAAAAGCTACTAAAAATGAACGGCCCTGAAGAT  
CTTCCCAAGTCCTATGACTATGACCTTATCATCATTGGAGGTGGCTCAGGAGGTCTGGCAGCTGCTAAGGAGGCA  
GCCCAATATGGCAAGAAGGTGATGGTCCTGGACTTTGTCACTCCCAACCCTCTTGGAAGTAGATGGGTCTCGGA  
GGAACATGTGTGAATGTGGGTTGCATACCTAAAAACTGATGCATCAAGCAGCTTTGTTAGGACAAGCCCTGCAA  
GACTCTCGAAATTATGGATGGAAGTCTGAGGAGACAGTTAAGCATGATTGGGACAGAATGATAGAAGCTGTACAG  
AATCACATTGGCTCTTTGAATTGGGGCTACCGAGTAGCTCTGCGGGAGAAAAAGTCGTCTATGAGAATGCTTAT  
GGGCAATTTATTGGTCCTCACAGGATTAAGGCAACAAATAATAAAGGCAAGAAAAAATTTATTACAGCAGAGAGA  
TTTCTCATTGCCACTGGTGAAGAGACACGTTACTTGGGCATCCCTGGTGACAAAGAATACTGCATCAGCAGTGAT  
GATCTTTTCTCCTTGCCCTTACTGCCCGGTAAGACCCTGGTTGTTGGAGCATCCTATGTCGCTTTGGAGTGGCCT  
GGATTTCTTGCTGGTATTGGTTAGACGTCAGTGTATGGTTAGGTCCATTCTTCTTAGAGGATTTGACCAGGAC  
ATGGCCAACAAAATTGGTGAACACATGGAAGAACATGGCATCAAGTTTATAAGACAGTTCGTACCAATTAAGTT  
GAACAAATTGAAGCAGGGACACCAGGCCGACTCAGAGTAGTAGCTCAGTCCACCAATAGTGAGGAAATCAITGAA  
GGAGAATATAATACGGTGATGCTGGCAATAGGAAGAGATGCTTGCAAGAAAAATTGGCTTAGAAACCGTAGGG  
GTGAAGATAAATGAAAGACTGGAAAAATACCTGTCACAGATGAAGAACAGACCAATGTGCCTTACATCTATGCC  
ATTGGCGATATATTGGAGGATAAGGTGGAGCTCACCCAGTTGCAATCCAGGCAGGAAGATTGCTGGCTCAGAGG  
CTCTATGCAGGTTCCACTGTCAAGGTGACTATGAAATGTTCCAACCACTGTATTTACTCCTTTGGAATATGGTG  
CTTGTTGGCCTTTCTGAGGAGAAAGCTGTGGAGAAGTTTGGGGAAGAAAATATTGAGGTTTACCATAGTTACTTTT  
GGCCATTGGAATGGACGATTCCGTCAAGAGATAACAACAAATGTTATGCAAAAATAATCTGTAATACTAAAGACA  
ATGAACGTGTTGTGGGCTTTCACGTACTGGGTCCAAATGCTGGAGAAGTTACACAAGGCTTTGTCAGCTGCGCTCA  
AATGTGGACTGACCAAAAAGCAGCTGGACAGCACAAATGGAATCCACCCTGTCTGTGCAGAGGTATTACAAACAT  
TGTCTGTGACCAAGCGCTCTGGGGCAAGCATCCTCCAGGCTGGCTGCTGAGGTTAAGCCCCAGTGTGGATGCTGT  
TGCCAAGACTGCAAAACCACTGGCTCGTTTCCGTGCCCAAATCCAAGCGAAGTTTCTAGAGGGTTCTTGGGCTC  
TTGGCACCTGCGTGTCTGTGCTTACCACCGCCCAAGGCCCTTGGATCTCTTGGATAGGAGTTGGTGAATAGA  
AGGCAGGCAGCATCACACTGGGGTCACTGACAGACTGAAGCTGACATTGGCAGGGCATCGAAGGGATGCATCC  
ATGAAGTCACCAGTCTCAAGCCCATGTGGTAGGCGGTGATGGAACAACGTCAAATCAGTTTATAGCATGACCTTT  
CCTTGTGGATTTTCTTATTCTCGTTGTCAAGTTTCTAGGGTTGAATTTTCTTTTTTCTCCATGGTGTTAAT  
GATATTAGAGATGAAAAACGTTAGCAGTTGATTTTGTCCAAAAGCAAGTCATGGCTAGAGTATCCATGCAAGGT  
GTCTTGTGTCATGGAAGGGATAGTTTGGCTCCCTTGGAGGCTATGTAGGCTTGTCCCGGGAAGAGAACTGTCT  
GCAGCTGAAATGGACTGTTCTTTACTGACCTGCTCAGCAGTTTCTTCTCTCATATATTCCCAAAACAAGTACATC  
TGCGATCAACTCTAGCCAAATTTGCCCTGTGTGCTACATGATGGATGATTATTATTTAAGGTCTGTTTAGGAA  
GGGAAATGGCTACTTGGCCAGCCATTGCCTGGCATTGTGTAGTATAGTATGATTCTCACCATTATTGTCTATGGA  
GGCAGACATACACCAGAAATGGGGGAGAAACAGTACATATCTTTCTGCTTTAGTTTATTGTGTGCTGGTCTAAG  
CAAGCTGAGATCATTGCAATGGAACACGTAACCTGTTTAAAGTTTTTCTGGTAGCTTTAGCTTTATGCTAA  
AAAAATAATGACATTGGGTATCTATTTCTTTCTAAGACTACATTAGTAGGAAAAATAAGTCTTTTCATGCTTATG  
ATTTAGCTGTTTTTGTGGTAATTGCTTTTAAAGGAAGTTATTAATATCATAGTTATTATTAATATTTGAACAC  
AGGTGGATGTGAAGGATTTTCATTTAAACCAAGTGGTTTTGACTTTTTCTGTTGAATGAACAACTGTGCCTTG  
TGGAATTTTTCAGAAAGTGTATTGCTTTGTTAGCATTTCAACTTGCAATTATTATAAAGAGGTATTAATGCCTCA  
GTTATGTGTTTGTCAATGTACTGGCTGAGGATTCTATCTCAGCTGTCTTTTCTAACTGTGTAGGTTGAGTTTTGA  
ACACGTGCTTGTGGACATCAGGCCTCCTGCCAGCAGTCTTGAAGCTTCTTTTTCATTCTGCTACTCTACCTGT  
ATTTCTCAGTTGCAGACTGAGTGGTCAAATACATTTCTGGGCCACCTCAGGGAACCCATGCATCTGCCTGGCA  
TTTAGGCAGCAGAGCCCTGACCGTCCCCACAGGGCTCTGCCCTACGTCCTCATCTCATTGGCTGTGTAAAGA  
AATGGGAAAAGGGAAAAGGAGAGCAATTGAGGCAGTTGACCATATTCAGTTTATTTATTTATTTTAAATTTG  
TTTTTTCTCCAAGTCCACCAGTCTCTGAAATTAGAACAGTAGGCGGTATGAGATAATCAGGCCTAATCATGTTG

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**FIGURE 3771B**

TGATTCTCTTTTCTTAGTGGAGTGGAATGTTCTATCCCCACAAGAAGGATTATATCTTATAGACTTGTCTTGTTCTC  
AGATTCTGTATTTACCCATTTTATTGAAACATATACTAAGTTCCATGTATTTTGTACAAATCTTCTGAAAAAA  
AACAAAACAATGTGAAACATTAAAATTAAAAGGCATTAATAATA

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**FIGURE 3772**

CTTTTGC GGGTGGCGGCGAACGCGGAGAGCACGCCATGAAGGCCTCGGGCACGCTACGAGAGTACAAGGTAGTGG  
GTCGCTGCCTGCCCACCCCAAATGCCACACGCCGCCCTCTACCGCATGCGAATCTTTGCGCCTAATCATGTCG  
TCGCCAAGTCCCGCTTCTGGTACTTTGTATCTCAGTTAAAGAAGATGAAGAAGTCTTCAGGGGAGATTGTCTACT  
GTGGGCAGGTGTTTGAGAAGTCCCCCTGCGGGTGAAGAACTTCAGGATCTGGCTGCGCTATGACTCCCGGAGCG  
GCACCCACAACATGTACCGGGAATACCGGGACCTGACCACCGCAGGCGCTGTCACCCAGTGCTACCGAGACATGG  
GTGCCCCGCACCGCGCCCGAGCCCACTCCATTGAGATCATGAAGGTGGAGGAGATCGCGGCCAGCAAGTGCCGCC  
GGCCGGCTGTCAAGCAGTTCACGACTCCAAGATCAAGTTCCCGCTGCCCCACCGGGTCTGCGCCGTCAGCACA  
AGCCACGCTTCACCACCAAGAGGCCCAACACCTTCTTCTAGGTGCAGGGCCCTCGTCCGGGTGTGCCCCAAATAA  
ACTCAGGAACGCCCCGGT

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**FIGURE 3773**

CGCATCCCCAGCCCGCCGCCATGGCCGCCTACAACTGGTGCTGATCCGGCACGGCGAGAGCGCATGGAACCTGG  
AGAACCGCTTCAGCGGCTGGTACGACGCCGACCTGAGCCCGCGGGCCACGAGGAGGCGAAGCGCGGCGGGCAGG  
CGCTACGAGATGCTGGCTATGAGTTTGACATCTGCTTCACCTCAGTGCAGAAGATCTGGAGGCGCTCCTATGATG  
TCCCACCACCTCCGATGGAGCCCGACCATCCTTTCTACAGCAACATCAGTAAGGATCGCAGGTATGCAGACCTCA  
CAGAAGATCAGCTACCCTCCTGTGAGAGTCTGAAGGATACTATTGCCAGAGCTCTGCCCTTCTGGAATGAAGAAA  
TAGTTCCCCAGATCAAGGAGGGGAAACGTGTACTGATTGCAGCCCATGGCAACAGCCTCCGGGGCATTGTCAAGC  
ATCTGGAGGGTCTCTCTGAAGAGGCTATCATGGAGCTGAACCTGCCGACTGGTATTCCCATTGTCTATGAATTGG  
ACAAGAACTTGAAGCCTATCAAGCCCATGCAGTTTCTGGGGGATGAGGAGACGGTGCGCAAAGCCATGGAAGCTG  
TGGCTGCCCAGGGCAAGGCCAAGAAGTGAAGGCCGGCGGGGAAGATACTGTCCCAGGAGCACCCTCCCTGCCCCA  
TCTTGTCCTCTGCCCCCTCCACCTGCACATGTCACTGACCACATCTGTAGACATCTTGAGTTGTAGCTGCAG  
ATGGGGACCACTGGCTCCCATTTTCATTTTAGCCATTTTGTGCGCTGCACCCACTCCCTTCATACAATCTAGTCA  
GAATAGCAGTTCTAGAGCACAGGTTCTCAGTCTAAGCTATGGAAAAGCTCCCCTTATCCAACAGAGTTTAAACC  
ATGCTAAGCCATGACCAGTGAGAAGAAGCAACAGAGCCTGTCTGTCCCCATGAGCGGAGTCTGTCTCTGCTCTT  
CTGCAGTCAGGTCAGTGCCTACTGCCTGGGGGCTCTAGTCATTCCAGTGGAAGACGAATGTAACCTGCGTGGTGA  
TGTGACAACTGTTT

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**FIGURE 3774**

GTGGGCGGACCGCGCGGCTGGAGGTGTGAGGATCCGAACCCAGGGGTGGAGGCGGCTCCTGCGATCGAAGGGGAC  
TTGAGACTCACCGGCCGCACGCCATGAGGGCCCTGTGGGTGCTGGGCCCTCTGCTGCGTCCTGCTGACCTTCGGGT  
CGGTCAGAGCTGACGATGAAGTTGATGTGGATGGTACAGTAGAAGAGGATCTGGGTAAAAGTAGAGAAGGATCAA  
GGACGGATGATGAAGTAGTACAGAGAGAGGAAGAAGCTATTCAAGTTGGATGGATTAAATGCATCACAAATAAGAG  
AACTTAGAGAGAAGTCGGAAAAGTTTGCCTTCCAAGCCGAAGTTAACAGAATGATGAACTTATCATCAATTTCAT  
TGTATAAAAATAAAGAGATTTTCTGAGAGAAGTATTCAAATGCTTCTGATGCTTTAGATAAGATAAGGCTAA  
TATCACTGACTGATGAAAATGCTCTTTTGGAAATGAGGAAGTAAACAGTCAAAATTAAGTGTGATAAGGAGAAGA  
ACCTGCTGCAITGTCACAGACACCGGTGTAGGAATGACCAGAGAAGAGTTGGTTAAAAACCTTGGTACCATAGCCA  
AATCTGGGACAAGCGAGTTTTTAAACAAAATGACTGAAGCACAGGAAGATGGCCAGTCAACTTCTGAATTGATTG  
GCCAGTTTGGTGTGCGTTTCTATTCCGCCTTCTTGTAGCAGATAAGGTTATTGTCACCTTCAAAACACAACAACG  
ATACCCAGCACATCTGGGAGTCTGACTCCAATGAATTTTCTGTAATTGCTGACCCAAGAGGAAACACTCTAGGAC  
GGGGAACGACAATTACCTTGTCTTAAAGAAGAAGCATCTGATTACCTTGAATTGGATAACAATAAAAATCTCG  
TCAAAAATATTACAGTTTCATAAACTTTCTATTTATGTATGGAGCAGCAAGACTGAACTGTTGAGGAGCCCA  
TGGAGGAAGAAGAAGCAGCCAAAGAAGAGAAAGAAGAACTGATGATGAAGCTGCAGTAGAGGAAGAAGAAG  
AAAAGAAACCAAGACTAAAAAAGTTGAAAAAAGTGTCTGGGACTGGGAACCTTATGAATGATATCAACCAATAT  
GGCAGAGACCATCAAAAGAAGTAGAAGAAGTGAATACAAAGCTTCTACAAATCATTTTCAAAGGAAAGTGATG  
ACCCCATGGCTTATATTCACTTTACTGCTGAAGGGGAAGTTACCTTCAAATCAATTTTATTTGTACCCACATCTG  
CTCCACGTGGTCTGTTTGACGAATATGGATCTAAAAAGAGCGATTACATTAAAGCTCTATGTGCGCGGTGATTCA  
TCACAGACGACTTCCATGATATGATGCCTAAATACCTCAATTTTGTCAAGGTGTGGTGGACTCAGATGATCTCC  
CCTTGAATGTTTCCGCGAGACTCTTCAGCAACATAAACTGCTTAAAGGTGATTAGGAAGAAGCTTGTTCGTA  
CGCTGGACATGATCAAGAAGATTGCTGATGATAAATACAATGATACTTTTGGAAAGAATTGTTACCAACATCA  
AGCTTGGTGTGATTGAAGACCACTCGAATCGAACACGTCTTGCTAACTTCTTAGGTTCCAGTCTTCTCATCATC  
CAACTGACATTACTAGCCTAGACCAGTATGTGGAAAGAATGAAGGAAAAACAAGACAAAATCTACTTCATGGCTG  
GGTCCAGCAGAAAAGAGGCTGAATCTTCTCATTGTTGAGCGACTTCTGAAAAAGGGCTATGAAGTTATTTACC  
TCACAGAACCTGTGGATGAATACTGTATTACGGCCCTTCCCGAATTTGATGGGAAGAGGTTCCAGAATGTTGCCA  
AGGAAGGAGTGAAGTTTCGATGAAAGTGAGAAACTAAGGAGAGTCTGTAAGCAGTTGAGAAAGAATTGAGCCTC  
TGCTGAATTGGATGAAAGATAAAGCCCTTAAGGACAAGATTGAAAAGGCTGTGGTGTCTCAGCGCCTGACAGAAT  
CTCCGTGTGCTTTGGTGGCCAGCCAGTACGGATGGTCTGGCAACATGGAGAGAATCATGAAAGCACAAGCGTACC  
AAACGGGCAAGGACATCTCTACAAATTACTATGCGAGTCAGAAGAAAACATTTGAAATTAATCCCAGACACCCGC  
TGATCAGAGACATGCTTCGACGAATTAAGGAAGATGAAGATGATAAAACAGTTTTGGATCTTGCTGTGGTTTTGT  
TTGAAACAGCAACGCTTCGGTCAGGGTATCTTTTACCAGACACTAAAGCATATGGAGATAGAATAGAAAGAATGC  
TTCGCTCAGTTTGAACATTGACCCTGATGCAAAGGTGGAAGAAGAGCCTGAAGAAGAACCTGAAGAGACAGCAG  
AAGACACAACAGAAGACACAGAGCAAGACGAAGATGAAGAAATGGATGTGGGAACAGATGAAGAAGAAGAACAG  
CAAAGGAATCTACAGCTGAAAAAGATGAATTGTAATTATCTCTACCATTGATCCTGTGTGGAGAGGGAAAT  
GTGAAATTTACATCATTTCTTTTTGGGAGAGACTTGTTTGGATGCCCCCTAATCCCCTTCTCCCCTGCACTGTA  
AAATGTGGGATTATGGGTCACAGGAAAAAGTGGGTTTTTTAGTTGAATTTTTTTTAAACATTCCTCATGAATGTAA  
ATTTGTACTATTTAACTATTCTTGATGTAAAATCTTGTATGTGTATAAAAAATAAAAAGATCCCAAAT

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**FIGURE 3775**

ATGAGCTTCACCACTCGCTCCACCTTCTCCACCAACTACCGGTCCCTGGGCTCTGTCCAGACGCCCAGCTATGGC  
GCCTGGCCAGTCAGCAGTGTGGCCAGCGTCTATGCAGGCAGCAGGGGCTCTCATTCCCGGATCTCTGTGTGCTGC  
TTCACCAGCTTCCGGGTTGCA TGGGGAATAGGAGGCATCCAGAACCAGAAGGAGACCATGCAAAGCCTGAACGAC  
TGCCTGGCTCCTACCTGGACAGAGTGAGGAGCCTGGTGACCAAGAACCAGAAGCTGGAGAGCAAAATCCGGGAG  
CACGTGGAGAAGAAGGGACCCCATGTCAGAGACTGGAGCCATTACTTCAAGATCATCGATGACCTGAGGGCTCAG  
ATCTTTGCAAACACTGTGGACAATGCCTGCATCGTTCTGCAGATCGACAATGTCTGTCTTGCTGCTGATGACTTT  
AGGGTCAAGTATGAGACAGAGCTGGCCATGGCCCATGACATCCATGGGCTCCGCAAGGTCATTGTTGACACCAAT  
GTCCTCGGCTGCAGCTGGAGACAGAGATTGAGGCTCTCAAGGAGGAGCTGCTCTTCATAAAGAAGAACCACAAA  
GAGGAAGTAAAAGGCCTACAAGCCCAGATTGCCAGCTCTGGGTTGACCATGGAGGTAGATGCCCTTAAATCTCAG  
TGCCTCGCCAAGATCATGGCAGACATCTGGGCCCCAATATGACGAGCTGGCTCGGAAGAACCAAGAGGAGCTGGAC  
AAATACTGGTCTCAGAAGAATGAGGAAATCGCCAAAGTGGTCACCACGCAGTCCGCCGAGGTTGGAGCTGCTGAG  
ATGACGCTCACAGAGCTGAGATGTACAGTCCAGTCTTGGAGGTTGACCTGGACTCCATGAGAAGTCTGAAGGCC  
AGCTTGGAGGACCGCCTGAGGGAGGTGGAGGCCCCGCCACACCCTGCAGATGGAGCAGCTCAATGGGATCCTGTTG  
CACCTGGAGTCAGAGCTGGCACAGACCCTGGCAGAGGGACAGTGCCAGGCCCAGGAGTACGAGGCCCTGCTGAAC  
ATCAAGGTCAAGTTGGAGGCTGAGATCGCCACCTACCGCCGCCTGCTGGAAGATGGCGAGGAGTTCAATCTTGGT  
GATGCCCTGGACAGCAGCAACTCCATGCAAACCATCCAAAAGACCACCACTGCCGGATAG



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**FIGURE 3776**

MSGGGLAAGMAGGLAGIGGIQNEKETMQSLNDCLASYLDRVRSVTKNQKLESKIREHVEKKGPHVRDWSHYFKI  
IDDLRAQIFANTVDNACIVLQIDNVCLAADDFRVKYETELAMAHDIHGLRKVIVDTNVTRLQLETEIEALKEELL  
FIKKNHKEEVKGLQAQIASSGLTMEVDALKSQCLAKIMADIWAQYDELARKNQEELDKYWSQKNEEIAKVTTQS  
AEVGAAEMTLTELRC TVQSLEVDLDSMRSLKASLEDRLREVEARHTLQMEQLNGILLHLESELAQTLAEGQCQAO  
EYEALLNIKVKLEAEIATYRRLLEDGEEFN LGDALDSSNSMQTIQKTTTAG

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**FIGURE 3777**

CAGTGCCAGGCTGGAGGCGGCAGCGGTTGGAGGCTTCGCCCGGCTTTGCAGCGGGGACTTCGGCGGCGGCGCCTC  
AGGCACCTCGGCCCCGACACGATGAGGCGAGTGGTACGACAGAGCAAGTTTCGGCATGTATTTGGGCAAGCGGTG  
AAAAATGACCAGTGCTATGATGACATCCGGGTTTCTCGTGTGACCTGGGATAGTTCCTTTTGTGCTGTCAATCCC  
AGATTGTGGCCATAATCATAGAGGCAAGTGGGGGAGGAGCGTTCCTTGTCTCCCTCTGCACAAGACTGGTCGA  
ATTGACAAATCTTACCCTACAGTATGTGGCCACACAGGACCAGTGCTGGACATAGACTGGTGGCCACATAACGAT  
CAGGTCATTGCCAGCGGTTTCAGAGGACTGCACGGTCATGGTATGGCAGATCCCAGAAAATGGACTCACCCCTTCC  
CTGACTGAACCTGTGGTGATTTTGAAGGCCACTCAAAGAGAGTCCGGCATCGTGGCTTGGCATCCAACGGCCCCG  
AATGTGCTTCTTAGTGACAGGCTGTGATAATGCCATTATCATCTGGAATGTGGGAACAGGGGAAGCCCTTATAAAC  
TTGGACGATATGCATTACAGCATGATTTACAATGTGAGCTGGAACCGGAATGGCAGTCTGATCTGCACAGCTTCC  
AAAGACAAGAAAGTGAGAGTCATTGATCCCAGGAAACAAGAGATTGTTGCTGAGAAGGAGAAAGCACATGAAGGA  
GCAAGACCCATGAGAGCCATCTTCTGGCCGATGGCAATGTCTTCACTGGGTTTCAGCCGCATGAGCGAGCGG  
CAGCTGGCTCTCTGGAATCCGAAAAATATGCAGGAACCAATTGCTCTTCATGAGATGGACACTAGCAATGGGGTG  
TTGCTGCGCTTCTATGACCTGACACCAGCATCATTTACTTATGTGGAAGGGTGACAGCAGTATTCGCTATTTT  
GAGATCAGCGATGAATCCCCGTACGTCCACTACCTCAACACATTCAGCAGCAAGGAGCCTCAGAGAGGGATGGGT  
TACATGCCCCAAGAGGGGACTTGATGTTAACAATGTGAGATTGCCAGATTCTTCAAACCTTCATGAGAGAAAGTG  
GAACCTATTATTATGACTGTTCAGGAAGTCTGACCTTTTCCAAGATGACCTGTATCCTGACACAGCGGGGCCA  
GAGGCCGCGCTGGAGGCAGAAGAGTGGTTCGAAGGCAAGAATGCAGACCCAATCCTCATCTCCTTGAAGCACGGG  
TACATTCCAGGCAAAAACAGGGATCTCAAGTGGTCAAGAAGAACATTCTGGATAGCAAGCCCACTGCAACAAG  
AAGTGCGACCTGATCAGCATCCCCAAGAAAACACAGACAGGCCAGTGTGCAAAATGAAGCCAAGTTGGATGAG  
ATTTTAAAAGAGATCAAATCTATAAAAGACACAATCTGCAATCAAGATGAGCGTATTTCCAAGTTAGAACAGCAG  
ATGGCAAAGATAGCAGCCTGAAGGTCCCACCCCCACCCCTACAGAAAAAATGGGAGCAAGAAGCTTGTGCTTGGGA  
GCTGGTTATTGGTGTGGTCTTAGGGAGGGCGGAAAGGGAGGCACTGCCATTTGGAGACATTCCATTTAGATTG  
TCAACCAGCGATAGGCCACATTCCAGTAAGAACTCAATTTGTCTCCCAAATTTGCAGAAACAAAACGTGATTAA  
AAGCTGAGCTTTTTATCAGAAAGCTTTTTTGATGTTTTAAGTGTTATGTGACTTGTGAACTTTTTTAAAAGTGC  
TACTTTTTAAATCCCAGATACTCTGAATTTTAGAAAACAACTAATTCTGATTGTGTCGTGCCAAGTACCCCTT  
TTTTTTTAAATGAATAGGGACCAATGCCACATTGCTTTTTATATTTCTTCTTTTTTAAATGTTGCCAAAACCAAAA  
GTAGCTTTGTTTTCTTTGTATTTTGCTACTTTGCAGTATTTGTGTGTGGTTTTTTTTCTTAAATTTGAAAGG  
GACAGCACTGTGTATGTTTATAAACTAAATGAAGATAAGATATTATTTGTATAAACATTTCATCTGAGAACAATC  
AAAGCAGTAGCCACATGGTGTGGTCTCCTTTGCAGCACAACCTGGTCATTTTGATGACTGTACAACAGGAAGAC  
TTGAAAAATCACGTGGATTTCATATTACCACCGCTCTCATTTTCATGGAGTCTTCTGATCAAAAAAGCTCACGTCTG  
ATTTCTTCTTTCTTCTTCTTTCTAGAAAATTGGGTGTTTGTACCAGAAATGGAATTTTGCTTCTCGGTTATCCT  
GTGCTTCAGATGATTATAATCTAACCC

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**FIGURE 3778**

MRRVVRQSKFRHVFGQAVKNDQCYDDIRVSRVTWDSSFCAVNPRFVAIIIEASGGGAFLVLPLHKTGRIDKSYPT  
VCGHTGPVLDIDWCPHNDQVIASGSEDCTVMVWQIPENGLTSLTEPVVILEGHSKRVGIVAWHPTARNVLLSAG  
CDNAIIIWNVGTGEALINLDDMHSDMIYNVSWNRNGSLICTASKDKKVRVIDPRKQEIVAEKEKAHEGARPMRAI  
FLADGNVFTTGFSRMSEQLALWNPKNMQEPIALHEMDTSNGVLLPFYDPDTSIIYLCGKGDDSSIRYFEITDESP  
YVHYLNTFSSKEPQRGMGYMPKRGLDVNKCEIARFFKLHERKCEPIIMTVPRKSDLFQDDLYPD TAGPEAALEAE  
EWFEGKNADPILISLKHGYIPGKNRDLKVVKNIILDSKPTANKKCDLISIPKKTTDTASVQNEAKLDEILKEIKS  
IKDTICNQDERISKLEQQMAKIAA .

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**FIGURE 3779**

ATGGCTGTAAAGCATCTTCAGAAGCATCGCCTCTGTTCCTTCTCCTGCTGGCCAGCTACAAGTGAGCGGCACAGC  
CTGCTCCATGCCACAGGCCTGCCCTGCGCCCCTGGGAACCATAGTAGTGACAGTCCACAAGGAGCATCCCGGCTGGG  
CCCCACAACAGGCCCCCGAACTAGAGAACGTGGAACATGAGTCTCTTAGGATGAACGAGGAGCCGCTGGAGCGG  
ACTCTCAGAGCGCTACCTGGCCACCAGTCTCTGGGTGGGGGTCTGGGGGCACCATGGTTTCGGCGGCAGCCCC  
AGCCTCCTCATCTTCTGTTGCTGCTCCTGGGGTCTGTGCCTGCTACCGACGCCCGCTCTGTGCCCCTGAAGGCC  
ACGTTCTGGAGGATGTGGCGGGTAGTGGGGAGGCCGAGGGCTCGTCGGCCTCCTCCCCGAGCCTCCCGCCACCC  
TGGACCCCGGCCCTCAGCCCCACATCGATGGGGCCCCAGCCCATACCTGGGGGGCCCCATCACCCCCACCAAC  
TTCCTGGATGGGATAGTGGACTTCTTCCGCCAGTACGTGATGCTGATTGCTGTGGTGGGCTCCCTGGCCTTTCTG  
CTGATGTTTCATCGTCTGTGCCGCGTCAACCCGGCAGAAGCAGAAGGCCTCGGCCTATTACCCATCGTCCTTC  
CCCAAGAAGAAGTACGTGGACCAGAGTGACCGGGCCGGGGCCCCCGGGCCTTCAGTGAGGTCCCCGACAGAGCC  
CCCGACAGCAGGCCCGAGGAAGCCCTGGATTCTCCCGGCAGCTCCAGGCCGACATCTTGGCCGCCACCCAGAAC  
CTCAAGTCCCCCACCAGGGCTGCACTGGGCGGTGGGGACGGAGCCAGGATGGTGGAGGGCAGGGGCGCAGAGGAA  
GAGGAGAAGGGCAGCCAGGAGGGGGACCAGGAAGTCCAGGGACATGGGGTCCCAGTGGAGACACCAGAGGCGCAG  
GAGGAGCCGTGCTCAGGGGTCTTGAGGGGGCTGTGGTGGCCGGTGAGGGCCAAGGGGAGCTGGAAGGGTCTCTC  
TTGTTAGCCCAGGAAGCCCAGGGACCAGTGGGTCCCCCGAAAGCCCCTGTGCTTGCAGCAGTGTCACCCAGT  
GTCTAA

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**FIGURE 3780**

MVSAAAPSLILLILLLLGSPATDARSVELKATFLEDVAGSGEAEAGSSASSPSLPPPWTPALSPTSMGPQPITLG  
GPSPTNFDGIVDFFRQYVMLIAVVGSLAFLLMFIVCAAVITRQKQKASAYYPSSFPKKKYVDQSDRAGGPRAF  
SEVPDRAPDSRPEEALDSSRQLQADILAATQNLKSPTRAALGGGDGARMVEGRGAEEEEKGSQEGDQEVQGHGVP  
VETPEAQEEPCSGVLEGAVVAGEGQGELEGSLLLAQEAQGPVGPPEPCACSSVHPSV

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**FIGURE 3781**

GGGACCTTAATTCTCTTTCCCATCTTGCAAGATGGCGGGTGAAAAAGTTGAGAAGCCAGATACTAAAGAGAAGAA  
ACCCGAAGCCAAGAAGGTTGATGCTGGTGGCAAGGTGAAAAAGGGTAACCTCAAAGCTAAAAAGCCCAAGAAGGG  
GAAGCCCCATTGCAGCCGCAACCCTGTCCTTGTCAGAGGAATTGGCAGGTATTCCCGATCTGCCATGTATTCCAG  
AAAGGCCATGTACAAGAGGAAGTACTCAGCCGCTAAATCCAAGGTTGAAAAGAAAAAGAAGGAGAAGGTTCTCGC  
AACTGTTACAAAACCAAGTTGGTGGTGACAAGAACGGCGGTACCCGGGTGGTTAAACTTCGCAAAATGCCTAGATA  
TTATCCTACTGAAGATGTGCCTCGAAAGCTGTTGAGCCACGGCAAAAAACCCTTCAGTCAGCACGTGAGAAAAC  
GCGAGCCAGCATTACCCCCGGGACCATTCTGATCATCTCACTGGACGCCACAGGGGCAAGAGGGTGGTTTTCT  
GAAGCAGCTGGCTAGTGGCTTATTACTTGTGACTGGACCTCTGGTCCTCAATCGAGTTCCTCTACGAAGAACACA  
CCAGAAATTTGTCATTGCCACTTCAACC AAAATCGATATCAGCAATGTAAAAATCCCAAAACATCTTACTGATGC  
TTACTTCAAGAAGAAGAAGCTGCGGAAGCCCAGACACCAGGAAGGTGAGATCTTCGACACAGAAAAAGAGAAATA  
TGAGATTACGGAGCAGCGCAAGATTGATCAGAAAGCTGTGGACTCACAAATTTTACCAAAATCAAAGCTATTCC  
TCAGCTCCAGGGCTACCTGCGATCTGTGTTTGCTCTGACGAATGGAATTTATCCTCACAAATTGGTGTCTTAAAT  
GTCTTAAGAACCTAATTAAATAGCTGACTACAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3782**

MAGEKVEKPDTEKKPEAKKVDAGGKVKKGNLAKKKPKKGKPHCSRNPVLVRGIGRYSRSAMYSRKAMYKRKYS  
AKSKVEKKKKEKVLATVTKPVGGDKNGGTRVVKLRLKMPRYPTEDVPRKLLSHGKKPFSQHVRKLRA  
SITPGTIL  
IILTGRHRGKRNVFLKQLASGLLLVTGPLVLNRVPLRRTHQKFVIATSTKIDISNVKIPKHLTDAYF  
KKKKLRKP  
RHQEGEIFDTEKEYEITEQRKIDQKAVDSQILPKIKAIPQLQGYLRSVFALTNGIYPHKLVE

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**FIGURE 3783**

AGTTCACCCAGGCCCTGAACTGCCAAACAGTTACTCAACTGCTTAAGCTGGCCACAAATACAGACAAGAGACCA  
CCTGCCCTTCGAGCAGGAGTTAACACCATCACCACCTTGGTGGAGAACAAGAAAGCTCAGCTGGTGGTGATTGCA  
CACGATGTGGATTCCATCGAGCTGGTTGTCTTCTTGCCCTGCCCTGTGTTGTAAAATGGGAGTCCCTTACTGCATT  
ATCAAGGGGAAGGCAAGACTGGGCCGTCTAGTCCACAGGAAGACCTGCACCACTGTCGCCTTCACACAGGTGAAC  
TTGGAAGACAAAGGCGCTTTGGCTAAGCTGGTGGGAAGGTATCAGGACCAATGACAATGACAGATACGATGAGATC  
TGCTGTCACTGGGGAGGCAATATCTTGGGTCCCAAGTCTGTGGCTTGCAATTGCCAAGCTCGAAAAGGCAAAGGCT  
AAAGAACTTGCCACTAACTGGGTTAAATGTATACTGTTGAGTTTCTGTACATAAAAATAATGAAAATAATACA  
AATTTTCCTT



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**FIGURE 3784**

MGVPYCIK GKARLGRLVHRKTCTTVAF TQVNLEDKGALAKLVEGIR TNDNDRYDEICCHWGGN ILGPKSVACIA  
KLEKAKAKELATKLG

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**FIGURE 3785**

CGGCCGGCGATATGGCTGCCGCTGTGCCCCGCGCCGCATTTCTCTCCCCGCTGCTTCCCCTTCTCCTGGGCTTCC  
TGCTCCTCTCCGCTCCGCATGGCGGCAGCGGCCTGCACACCAAGGGCGCCCTTCCCCTGGATACGGTCACTTTCT  
ACAAGGTCATTCCCAAAGCAAGTTCTGTCTTGGTGAAGTTGACACCCAGTACCCCTACGGTGAGAAGCAGGATG  
AGTTCAAGCGTCTTGCTGAAAACCTCGGCTTCCAGCGATGATCTCTTGGTGGCAGAGGTGGGGATCTCAGATTATG  
GTGACAAGCTGAACATGGAGCTGAGTGAGAAATACAAGCTGGACAAAGAGAGCTACCCAGTCTTCTACCTCTTCC  
GGGATGGGGACTTTGAGAAGCCAGTCCCATACTGGGGCAGTTAAGGTTGGAGCCATCCAGCGCTGGCTGAAGG  
GGCAAGGGGTCTACCTAGGTATGCCTGGTTGCCTGCCTGTATACGACGCCCTGGCCGGGGAGTTCATCAGGGCCT  
CTGGTGTGGAGGCCCGCCAGGCCCTCTTGAAGCAGGGGCAAGATAACCTCTCAAGTGTGAAGGAGACTCAGAAGA  
AGTGGGCCGAGCAATACCTGAAGATCATGGGGAAGATCTTAGACCAAGGGGAGGACTTCCCAGCATCAGAGATGA  
CACGGATCGCCAGGCTGATTGAGAAGAACAAGATGAGTGACGGCAAGAAGGAGGAGCTCCAGAAGAGCTTAAACA  
TCCTGACTGCCTTCCAGAAGAAGGGGGCCGAGAAAGAGGAGCTGTAAAAAGGCTGTCTGTGATTTTCCAGGGTTT  
GGTGGGGGTAGGGAGGGGAGAGTTAACCTGCTGGCTGTGAGTCCCTTGTGGAATATAAGGGGGTAGTGGGAACAG  
TGGTACTAACCACGATTCTGAGCCCTGAGTATGCCTGGACATTGATGCTAACATGACATGCT

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**FIGURE 3786**

MAAAVPRAAFLSPLLPLLLGFLLLSAPHGGSGLHTKGALPLDVTIFYKVIPKSKFVLVKFDIQTQYPYGEKQDEFKR  
LAENSASSDDLLVAEVGISDYGDKLNMEELSEKYKLDKESYPVFYLF RDGDFENVPYTGAVKVGAIQRWLKGQGV  
YLGMPGCLPVDALAGEFIRASGVEARQALLKQGQDNLSVKETQKKWAEQYLKIMGKILDQGEDFPASEMTRIA  
RLIEKNKMSDGKKEELQKSLNLTAFQKKGAKEEL

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**FIGURE 3787A**

ATGGTCTTGCTTCTTTGTCTATCTTGTCTGATTTTCTCTGTCTGACCTTTTCTTGTTAAAAATCTGGGGGAAA  
ATGACGGACTCCAAGCCGATCACCAGAGTAAATCAGAAGCAAACCTCATCCCGAGCCAGGAGCCCTTTCCAGCC  
TCTGATAACTCAGGGGAGACACCGCAGAGAAATGGGGAGGGCCACACTCTGCCCAAGACACCCAGCCAGGCCGAG  
CCAGCCTCCCAAAAGGCCCCAAAGATGCCGGTCGGCGGAGAACTCCCTACCACCCTCCACCAGAAGCCCCCA  
AGAAACCCCTTTCTTCCAGTGACGCAGCACCCCTCCCCAGAGCTTCAAGCCAACGGGACTGGGACACAAGGTCTG  
GAGGCCACAGATACCAATGGCCCTGTCTCTCAGCCAGGCCAGGGCCAGCAAGCTGGCTCCCCCTCCAAAGAA  
GACAAGAAGCAGGCAACATCAAGAGGCGCTGATGACCAACTTCATCCTGGGCTCTTTTGATGACTACTCTCC  
GACGAGGACTCTGTTGTCTGGCTCATCTCGTGAGTCTACCCGGAAGGGCAGCCGGGCCAGCTTGGGGGCCCTGTCC  
CTGGAGGCTTATCTGACCACAGGTGAAGCTGAGACCCGCTCCCCACTATGAGGCCGAGCATGTCCGGACTCCAC  
CTGGTGAAGAGGGGACGGGAACACAAGAAGCTGGACCTGCACAGAGACTTTACCGTGGCTTCTCCCGCTGAGTTT  
GTCACACGCTTTGGGGGGGATCGGGTCTATCGAGAAGGTGCTTATTGCCAACAACGGGATTGCCCGCTGAAGTGC  
ATGCGCTCCATCCGCAGGTGGGCCTATGAGATGTTCCGCAACGAGCGGGCCATCCGGTTTGTGTGATGGTGACC  
CCCGAGGACCTTAAGGCCAACGCAGAGTACATCAAGATGGCGGATCATTACGTCCCGTCCAGGAGGGCCCAAT  
AACAACAATATGCCAACGTGGAGCTGATTGTGGACATTGCCAAGAGAATCCCGTGCAGGCGGTGTGGGCTGGC  
TGGGGCCATGCTTCAGAAAACCTAAACTTCCCGAGCTGCTGTGCAAGAATGGAGTTGCTTTCTTAGXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXGAGATAAGATCGCCTCCACCGTTGTCGCCCAGACGCTACAGGTCCCAACC  
CTGCCCTGGAGTGGAAGCGGCCTGACAGTGGAGTGGACAGAAGATGATCTGCAGCAGGGAAAAAGAATCAGTGT  
CCAGAAGATGTTTATGACAAGGGTTGCGTGAAAGACGTAGATGAGGGCTTGAGGCGAGCAGAAAGAATTGGTTTT  
CCATTGATGATCAAAGCTTCTGAAGGTGGCGGAGGGAAGGGAATCCGGAAGGCTGAGAGTGGGAGGACTTCCCG  
ATCCTTTTTCAGACAAGTACAGAGTGAGATCCAGGCTCGCCCATCTTTCTCATGAAGCTGGCCAGCACGCCCGT  
CACCTGGAAGTTTCTGATCCTCGCTGACAGTATGGGAATGCTGTGTCTCTGTTTGGTTCGCGACTGCTCCATCCAG  
CGGCGGCATCAGAAGATCGTTGAGGAAGCACCGGCCACCATCGCCCCGCTGGCCATATTTCGAGTTCATGGAGCAG  
TGTGCCATCCGCTTGCCAAAGACCGTGGGCTATGTGAGTGCAGGGACAGTGGGAATACCTCTATAGTCAGGATGGC  
AGCTTCCACTTCTTGAGCTGAATCCTCGCTTGAGGTGGAAACATCCCTGCACAGAAATGATTGCTGATGTTAAT  
CTGCCGCGCCCGCAGCTACAGXXX  
XX  
XX  
CGGAGCAGCAAGAACGTGTGGGGTTACTTCAGCGTGGCCGCTACTGGAGGCTGCACGAGTTTGGCGATTCCCAA  
TTTGGGCACTGCTTCTCTGGGAGAGAACCGGGAAGAGGCCATTTCGAACATGGTGGTGGCTTTGAAGGAAGT  
TCCATCCGAGGCGACTTTAGGACTACCGTGAATACCTCATTAACCTCCTGGAGACCGAGAGCTTCCAGAACAAC  
GACATCGACACCGGTGGTTGGACTACCTCATTGCTGAGAAAGTGCAGGAGAAACCGGATATCATGCTTGGGGTG  
GTATGCGGGGCTTGAACGTGGCCGATGCGATGTTTCAACGTGCATGACAGATTTCTTACACTCCCTGGAAAGG  
GGCCAGGTCTCCAGCGGATTCACTACTGAACCTCGTAGATGTGGAATTAATTTACGGAGGTGTTAAGTACATT  
CTCAAGGTGGCCCGGAGTCTCTGACCATGTTCTGTTCTCATCATGAATGGCTGCCACATCGAGATTGATGCCAC  
CGGCTGAATGATGGGGGGCTCTGCTCTCCTACAATGGGAACAGCTACACCACCTACATGAAGGAAGAGGTTGAC  
AGXXXXXXXXXXCGGCAATAAGACGTGTGTGTTGAGAAGGAGAACGATCCTACAGTCTGAGATCCCCCTCG  
GCTGGGAAGCTGACACAGTACACAGTGGAGGATGGGGGCCACGTTGAGGCTGGGAGCAGCTACGCTGAGATGGAG  
GTGATGAAGATGATCATGACCCTGAACGTTTCAAGAAAGAGGCCGGGTGAAGTACATCAAGCGTCCAGGTGCCGTG  
CTGGAAGCAGGCTGCGTGGTGGCCAGGCTGGAGCTCGATGACCCTTCTAAAGTCCACCCGGCTGAACCGTTTACA  
GGAGAATCCCTGCCAGCAGACACTGCCCATCCTCGGAGAGAACTGCACCAGGTCTTCCACAGCGTCTTGAA  
AACCTCACCACGTCATGAGTGGCTTTTGTCTGCCAGAGCCGTTTTTAGCATAAAGCTGAAGGAGTGGGTGCAG  
AAGCTCATGATGACCTCCGGCACCCGCTACTGCCGCTGCTGGAGCTGCAGGAGATCATGACCAGCGTGGCAGGC  
CGCATCCCCGCCCTGTGGAGAAGTCTGTCCGAGGGTGATGGCCAGTATGCCAGCAACATCACTCGGTGCTG  
TGCCAGTTCCCCAGCCAGCAGATAGCCACCATCCTGGACTGCCATGCAGCCACCCTGCAGCGGAAGGCTGATCGA  
GAGGTCTTCTTCATCAACACCCAGAGCATCGTGAGTTGGTCCAGAGGTACCGCAGCGGGATCCGCGGCTATATG  
AAAACAGTGGTGTGGATCTCTGAGAAGATACTTGCCTGTTGAGCACCATTTTTCAGCAAGGCAAGAGATGCTGA  
TGCCAACACCAAGTGGGATGGTGGGGGGCTGAGGAGCTGAGCTTTACCTCTGTGTGGTGTGTTGTCTCCCCAG  
CCCACTACGACAAGTGTGTGATAAACCTCAGGGAGCAGTTCAAGCCAGACATGTCCAGGTGCTGGACTGCATCT

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**FIGURE 3787B**

TCTCCACGCACAGGTGGCCAAGAAGAACCAGCTGGTGATCAIGTTGATCGATGAGCTGTGTGGCCAGACCCCTT  
CCCTGTGCGACGAGCTGATCTCCATCCTCAACGAGCTCACTCAGCTGAGCAAAAGCGAGCACTGCAAAGTGGCCC  
TCAGAGCCCGGAGATCCTGATTGCCTCCACCTCCCTCCTACGAGCTGCGGCATAACCAGGTGGAGTCCATT  
TCCTGTCTGCCATTGACATGTACGGCCACCAGTTCTGCCCCGAGAACCCTCAAGGTGAAGAAATTAATACTTTCCG  
AAACAACCATCTTCGACGTCTGCCTACTTTCTTCTATCACGCAACAAAGTCGTGTGCATGGCGTCTTGGAGG  
TTTACGTGCGGAGGGGCTACATCGCCTATGAGTTAAACAGCCTGCAGCACCGGCAGCTCCCGGACGGCACCTGCG  
TGGTAGAATTCCAGTTTCATGCTGCCGTCTCCACCCAAACCGGATGACCGTGCCCATCAGCATACCAACCCCTG  
ACCTGCTGAGGCACAGCAGAGCTCTTCATGGACAGCGGCTTCTCCCACTGTGCCAGCGCATGGGAGCCATGG  
TAGCCTTCAGGAGATTTCGAGGACTTCACCAGAAATTTTGATGAAGTCATCTCTTGCTTCGCCAACGTGCCCAAAG  
ACACCCCCCTCTTCAGCGAGGCCGACCTCCCTACTACTCCGAGGATGACTGCAAGAGCCTCAGAGAAGAGCCCA  
TCCACATTCTGAATGTGTCCATCCAGTGTGCAGACCACCTGGAGGATGAGGCACTGGTGCCGATTTTACGGACAT  
TCGTACAGTCCAAAGAAAAATATCCTTGTGGATTATGAGTCCGACGAATCACATTCTTGATTGCCCAAGAGAAAG  
AATTTCCCAAGTTTTCATGATTTCAGAGCAAGAGATGAGTTTGCAGAAGATCGCATTTACCGTCACTTGGAACCTG  
CCCTGGCCTTCCAGCTGGAACTTAACCGGATGCGTAACCTTCGATCTGACCGCCGTGCCCTGTGCCAACCACAAGA  
TGCACCTTTACCTGGGTGCTGCCAAGGTGAAGGAAGGTGTGGAAGTGACGGACCATAGGTTCTTCATCCGCGCCA  
TCATCAGGCACCTGACCTGATCACAAAGGAAGCCTCCTTCGAATACCTGCAGAACGAGGGTGAGCGGCTGCTCC  
TGGAGGCCATGGACGAGCTGGAGGTGGCGTTCAATAACACCAGCGTGCGCACCGACTGCAACCACATCTTCTCTCA  
ACTTCGTGCCCACTGTCTCATATGGACCCCTTCAAGATCGAGGAGTCCGTGCGCTACATGGTTATGCGCTACGGCA  
GCCGGCTGTGGAAGTCCGTGTGTACAGGCTGAGGTCAAGATCAACATCCGCCAGACCACCACCGGCAGTGCCG  
TCCCCATCCGCCTGTTCATACCAATGAGTGGGGCTACTACCTGGACATCAGCCTCTACAAAGAAGTGACTGACT  
CCAGATCTGGAAATATCATGTTTCACTCCTTCGGCAACAAGCAAGGGCCCCAGCACGGGATGCTGATCAATACTC  
CCTACGTACCAAGGATCTGCTCCAGGCCAAGCGATTCCAGGCCAGACCCTGGGAACCACCTACATCTATGACT  
TCCCGGAAATGTTTCAGGCAGGCTCTCTTTAAACTGTGGGGCTCCCCAGACAAGTATCCCAAAGACATCCTGACAT  
ACACTGAATTAGTGTGGACTCTCAGGCCCCAGCTGGTGGAGATGAACCGACTTCTGGTGGAAATGAGGTGGGCA  
TGGTGGCCTTCAAATGAGGTTTAAAGACCCAGGAGTACCCGGAAGGACGGGATGTGATCGTCATCGGCAATGACA  
TCACCTTTTCGATTGGATCCTTTGGCCCTGGAGAGGACCTTCTGTACCTGCGGGCATCCGAGATGGCCCGGGCAG  
AGGGCATTCCCAAAATTTACGTGGCAGCCAACAGTGGCGCCCGTATTGGCATGGCAGAGGAGATCAAACACATGT  
TCCACGTGGCTTGGGTGGACCCAGAAGACCCCAAAAGGATTTAAATACCTGTACCTGACTCCCCAAGACTACA  
CCAGAATCAGCTCCCTGAACTCCGTCCACTGTAAACACATCGAGGAAGGAGGAGAGTCCAGATACATGATCACGG  
ATATCATCGGGAAGGATGATGGCTTGGCGTGGAGAATCTGAGGGGCTCAGGCATGATTGCTGGGGAGTCTCTCTC  
TGGCTTACGAAGAGATCGTCACCATTAGCTTGGTGACCTGCCAGCCATTGGGATTGGGGCCTACTTGGTGAGGC  
TGGGCCAGCGAGTGATCCAGGTGGAGAATTTCCACATCATCTCACAGGAGCAAGTGCTCTCAACAAGGTCTTGG  
GAAGAGAGGTCTACACATCCAACAACCAGCTGGGTGGCGTTTCAGATCATGCATTACAATGGTGTCTCCACATCA  
CCGTGCCAGATGACTTTGAGGGGGTTTATACCATCTGGAGTGGCTGTCTATATGCCAAAGGATAATCACAGCC  
CTGTCCCTATCATCACACCCACTGACCCCATTGACAGAGAAATTGAATTCCTCCCATCCAGAGCTCCCTACGACC  
CCCGGTGGATGCTTGCAGGAAGGCCTCACCCAACCTCTGAAGGGAACGTGGCAGAGCGGATTCTTTGACCACGGCA  
GTTTCAAGGAAATCATGGCACCCCTGGGCGCAGACCGTGGTGACAGGACGAGCAAGGCTTGGGGGGATTCCCGTGG  
GAGTGATTGCTGTGGAGACACGGACTGTGGAGGTGGCAGTCCCTGCAGACCCTGCCAACCTGGATTCTGAGGCCA  
AGATAATTCAGCAGGCAGGACAGGTGTGGTTCCAGACTCAGCCTACAAAACCGCCAGGCCGTCAAGGACTTCA  
ACCGGGAGAAGTTGCCCTGATGATCTTTGCCAACTGGAGGGGGTTCTCCGGTGGCATGAAAGACATGTATGACC  
AGGTGCTGAAGTTTGGAGCCTACATCGTGACGGCCTTAGACAATACAAACAGCCCATCCTGATCTATATCCCGC  
CCTATGCGGAGCTCCGGGGAGGCTCCTGGGTGGTCATAGATGCCACCATCAACCCGTGTGCATAGAAATGTATG  
CAGACAAAGAGAGCAGGGGTGGTGTCTGGAACCAGAGGGGACAGTGGAGATTAAGTTCCGAAAGAAAGATCTGA  
TAAAGTCCATGAGAAGGATCGATCCAGCTTACAAGAAGCTCATGGAACAGCTAGGGGAACCTGATCTCTCCGACA  
AGGACCGAAAGGACCTGGAGGGCCGGCTAAAGGCTCGCGAGGACCTGCTGCTCCCATCTACCACAGGTGGCGG  
TGCAGTTCGCGGACTTCCATGACACACCCGCGCGATGCTGGAGAAGGGCGTCATATCTGACATCTGGAGTGGGA  
AGACCGCACGCACCTTCTGTATTGGCGTCTGCGCCGCTCCTCCTGGAGGACCAGGTCAAGCAGGAGATCCTGC  
AGGCCAGCGGGAGCTGAGTCACGTGCATATCCAGTCCATGCTGCGTGGTTCGTGGAGACGGAGGGGGCTG

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**FIGURE 3787C**

TCAAGGCCTACTTGTGGGACAACAACCAGGTGGTTGTGCAGTGGCTGGAACAGCACTGGCAGGCAGGGGATGGCC  
CGCGCTCCACCATCCGTGAGAACATCACGTACCTGAAGCACGACTCTGTCCTCAAGACCATCCGAGGCCTGGTTG  
AAGAAAACCCCGAGGTGGCCGTGGACTGTGTGATATACCTGAGCCAGCACATCAGCCCAGCTGAGCGGGCGCAGG  
TCGTTACCTGCTGTCTACCATGGACAGCCCGGCCTCCACCTGA

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## FIGURE 3788A

GGCGGTAGTGCCTCGGCTGCTGCCCCGGGTCTGGCAGAACTCGGGTGTTTTGGGCTGAGACAGTGGCAGCTGCGG  
CCCCGACCCCAAGTGCAGGGGACCTCCGGCGAATAAAGGTCGGCCTGCGGGTAGGCCGGTAGGGCCTGCGGTCCGG  
CCTGCGGGGAGAACTGGGTCGTCAGTCTCCGAGTGGTGGGGCTGGGGACTTTGAGGGAGTTGGCTCTAGGGCACA  
GTCCCTGCGCTGGCCAGGTTCGGAGGAACAAGTGCTGGGATCTGGCGTGTGTGCTCCAGGGGCTCTTTCCGCGGCC  
TTTCCACCTCTTTTCACTTTGGGGACGGTAGGCCCTTTATAAACGGACTAATGCTGGGTGATTTGTTCCGTGTGGT  
GTTGATGCCGAGGAAAGACTCTGGGCCCCAGGACTCACCTAACTGGAGTTCGAATACTGTTGCTCGCTCGCTGTGTG  
ACCTTGAAAAAATAACAAGCTTTTCTGAAGTGAGAAGCTGTTCTCAGCCACGAGTCTGTGCAAGATCACTAAT  
GATTACCTGGCATTCTGCGACACAGGCAGGTCTCAGGGTTTGTGCAAGTTTGCAAACATGTTCAACCTGTCTC  
AGACCTCGAGAGCATGGTTTCATCGATAGAGCCCGTCAGGCACGAGAAGAAAGGCTTGTGCAAGGAACGGGAGC  
GGGCAGCTGTTGTGATCCAGGCCCATGTCCGGAGTTTCTCTGTCGGAGTCGACTGCAGAGAGATATCAGGAGAG  
AGATTGATGACTTTTTTAAAGCAGATGACCCTGAGTCCACTAAAGAAGTGACTTTGTATTTTCAAGATTGCCA  
GGAACTGCTGTTCTATTGAGAATCAAAGAGGATAATGAGAGATTGAGAAGTTGTGTCGACGATCTCTGAGCA  
GCATGGATGCTGAGAATGAGCCTAAGGTGTGGTATGTGTCCCTGGCTTGTCTAAGGACCTCACCTCTCTTTGGA  
TTCAACAGATCAAGAACATTTTGTGGTACTGCTGTGATTTTCTCAAGCAGCTCAAGCCTGAAATCTGCAAGGACT  
CCCGACTCATCACCTGTACCTCACGATGCTTGTACCTTCACAGACACTTCAACGTGGAAAATCTTCGGGGAA  
AAGGTGAAAGTCTTCGACCAGCGATGAACCACATTTGTGCAATATAATGGGACATCTCAACCAGCATGGATTTT  
ATTCTGTGCTGCAGATATTGTTAACCCGTGGCCTGGCAAGACCCCGTCTTGTCTATCCAAAGGCACTTTAACAG  
CAGCTTTTTCTCTAGCGTTACGCCCTGTGATTGCTGCACAGTTCTCAGACAATCTGATTGGCCGTTCTCTATCC  
ACATCATGCTGTGCTGCTCTGGTGACTCATCTCAGCACAGTGACCCCTGAGCGCCTCACTGTTTTAGAATCCC  
ATGACATGCTTCGTAAATTCATCATATTTTAAAGAGACCAAGATCGATGCCGTGATGTATGTGAAAGTTAGAAG  
GATGCCATACGCTTTGTCTAATGGGCAACCTCTACACTTGGGCTCCCTCAGCCCCAGAGTGTAGAGGAGGAGA  
CAGATGGGTTTCGTGAGTTTGTCTACCCAGACGCTGTGCTACTGTGCGAAGTATGTGCTCAGAAGAAGTCCAACC  
TGACCCACTGGCATCTGTCTCTGGCTGGTTCTCCCAATCTGTGGATTATGGCCTTAACGAGTCAATGCACTTGA  
TCACCAAACAGCTGCAGTTCTGTGGGGGGTGCCCTGTATCCGGATCTTCTTCTGTGACATCTGAGCAAGAAGC  
TACTGGAGAGCAGGAGCCAGCCACGCACAGCCAGCATCCCTCAGAATGTGCTCCAGTGAAGAGTCTCTTAA  
AGCGTGCTTTTCAAAGTCGGCATCAGTCCGGAATATTCTCAGGCCTGTGCGGGGTAAACGGGTCGACTCTGCAG  
AAGTCCAGAAGGTTTGCAACATCTGTGTCTCTACCAGACCTCGCTGACAACTCTCACACAGATTCGGCTGCAGA  
TACTCACAGGTCTCACTTACCTTGATGACCTGCTTCCCAAAGTGTGGGCATTTATCTGTGAGCTCGGGCCCCACG  
GAGGGTTAAAGCTCTTCTTGAATGCCTGAACAAATGACACTGAAGAGTCCAAGCAACTCTTGGCCATGCTGATGC  
TGTTCTGTGACTGTTTCGCGGCACCTCATACAATCTTGTGATGACATTGAAGTTTATGAAGAACAGATTTCATTCA  
AACTGGAAGAGCTGGTCACTATCTCTCTTCTTCTGAATCTTTTGTGTTAAGATGATCTGGGATGGAATTGTAG  
AGAACGCCAAGGGTGAGACCTTGGAGCTGTTCCAGTCTGTCCACGGGTGGCTTATGGTGTGTACGAGCGGGACT  
GCCGGCGCGCTTACCCCCGAGGACCACTGGCTGCGAAAGGATCTCAAACCTAGCGTGCTCTTCCAAGAAGCTCG  
ACAGGGACAGAAAACGGGCACAGTTGATCTCGAGTACATCCCATGTCTATCCCTCACAAAACAGAGTTCTAC  
TGTTTCGAACCATGGTTACCAAGGAGAAGGAGAACTGGGGCTGGTGGAAACAGCTCTGCCTCCCCGCATGTCA  
CTCACATCACCATCCGCCGCTCCAGGATGCTGGAGAGCTTGTTTGTGAGTGCCCTGGCCACTGGTGATCAATGCCG  
AGAGCTGCTAGGAAGGCAGTGTGTGCTGAACAGTGGATGTTTCTGACATTCTCAAGGACGGCTACGAGCAGCTT  
AGGCAGCTCTCCAGCACGCCATGAAGGGGGTATCCGTGTGAAGTTTGTCAATGACCTCGGGGTGGACGAAGCA  
GGGATTGATCAAGACGGTGTTTTTAAGGAGTTCTTGAAGAGATCATCAAGAGAGTTTTTGACCCAGCACTCAAT  
CTGTTCAAGACAACAGTGGGATGAGAGGCTGTACCCCTACCCACATCTACATCCATGAGAATTACCTGCAG  
CTCTTCGAGTTTGTGGGGAAGATGCTGGGGAAGGCTGTGTATGAGGGAATTGTGGTGGACGTGCCATTTGCATCC  
TTCTTCTGAGCCAACCTGCTTGGGCACCAACACAGCGTCTTCTATAGCTCGGTGGATGAACTGCCTTCTCTGGAC  
TCCGAGTTCTATAAAAACCTCACCTCCATCAAGCGCTATGATGGGACATCACTGACCTGGGCCTGACGCTGTCT  
TACGACGAGGACGTGATGGGTGAGCTTGTTTGCCATGAAGTATCTCTGGAGGGAAGACCATTCCTGTTACAAAT  
GAAAATAAGCAACAGAATTAGCTACATCCATCTGATGGCACATTTTGAATGCACACTCAAATAAAAAACCAAC  
AGCTGCCCTCATTAGCGGATTCCGTTCCATTATCAAACCCGAGTGGATCCGAATGTTCTCAACTCTGAACTGCA  
GCGTCTCATCTCTGGCGCAATGCTGAGATTGATCTGGAAGATTTAAAGAAGCACACAGTCTACTACGGTGGTTT  
CCATGGAAGTCACAGAGTCATCATCTGGCTCTGGGATATTCTGGCCTCCGACTTCACACCGGATGAGAGAGCTAT

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**FIGURE 3788B**

GTTTCTGAAGTTCGTGACCAGCTGCTCCAGACCCCGCTCCTGGGATTGCGCTACCTCAAGCCTCCATTCTCCAT  
CCGCTGCGTGGAGGTGTCGGACGATCAGGACACCGGGGACACTCTGGGCAGCGTCCTCCGGGGCTTCTTCACCAT  
CCGCAAGCGGGAGCCAG



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**FIGURE 3789**

MFTLSQTSRAWFIDRARQAREERLVQKERERAAVVIQAHVRSFLCRSRLQDIRREIDDFKADDPSTKRSALC  
IFKIARKLLFLFRIKEDNERFEKLCRSILSSMDAENEPKVWYVSLACSKDLTLLWIIQIKNILWYCCDFLKQLKP  
EILQDSRLITLYLTMLVFTDTSTWKILRGKGESLRPAMNHICANIMGHLNQHGFYSVLQILLTRGLARPRCLS  
KGTTLTAAFSALALRPVIAAQFSDNLIRPFLIHIMSVPALVTHLSTVTPERLTVLESHDMLRKFIIFLRDQDRCDV  
CESLEGCHTLCLMGNLLHLGSLSPRVLEEETDGFVSLLTQTLCYCRKYVSQKKSNIHWHHPVLGWFSSQSVGYGLN  
ESMHLITKQLQFLGWVPLIRIFFCDILSKLLESQEPAAQAPSPQNVLPVKSLLKRAFQKSASVRNLRPVGGK  
RVDSAQVQKVCNICVLYQTSLTTLTQIRLQIILTGLTYLDDLLPKLWAFICELGPHGGLKLFLECLNNDTEESKQL  
LAMLMLFCDCSRHLITILDDIEVYEEQISFKLEELVTISSFLNSFVKMIWDGIVENAKGETLELFQSVHGWLMV  
LYERDCRRRFTPEDHWLRKDLKPSVLFQELDRDRKRAQLILQYIPHVIPHKNRVLLFRTMVTKEKEKGLVETSS  
ASPHVTHITIRRSRMLEDGYEQLRQLSQHAMKGVIRVKFVNDLGVDEAGIDQDGVFKEFLEEIIKRVDFPALNLF  
KTTSGDERLYPSPTSIIHENYLQLFEFVGKMLGKAVYEGIVDVFPFASFLLSQLLGHHHSVFYSSVDELPSLDSE  
FYKNLTSIKRYDGDITDLGLTSLYDEDVMGQLVCHELIPGGKTIPVTNENKISYIHLMAHFRMHTQIKNQTAALI  
SGFRSIIKPEWIRMFSTPELQRLISGDNAEIDLEDLKKHTVYGGFHHGSHRVI IWLWDILASDFTPDERAMFLKF  
VTSCSRPPLLGFAYLKPPFSIRCVEVSDDQDTGDTLGSVLRGFFTIRKREPGRPLPTSSTCFNLLKLPNYSKKS  
V  
LREKLRYAISMNTGFELS

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**FIGURE 3790A**

GAAGCGCCGCCGCCACCGCCGCCTTTGCTGTCCCCCGGCCTCTAGTTCCCCGCAGGTGGGAGGTGGGAGCCATGT  
CGAAACGGCTCCGGAGCAGCGAGGTGTGCGCTGACTGCAGCGGGCGGATCCTTCTGGGCATCAGTAAATAGGG  
GAACGTTTTTATGTGATGAGTGCTGCAGTGCTCCATCGGAGTCTAGGGCGCCATATCTCCCAAGTGAGGCATCTGA  
AACACACACCGTGGCCTCCAACACTGCTTCAGATGGTTGAGACCTTGTATAATAACGGTGCTAACTCTATATGGG  
AGCATTCTTTGCTGGACCCTGCGTCTATTATGAGTGGAAGACGTAAAGCTAATCCACAGGATAAAGTACATCCCA  
ATAAAGCGGAATTCATCAGAGCCAAGTATCAGATGTTAGCGTTCGTCCATCGCTTGCCCTGCCGGGATGACGATA  
GTGTGACTGCCAAAGATCTTAGCAAGCAACTCCATTGAGCGTGAGAACAGGGAATCTTGAAACCTGTTTGAGAC  
TGTTATCTTTAGGAGCACAAGCCAACCTTCTTCATCCTGAAAAAGGAAACACCCCACTCCATGTTGCCCTCCAAAG  
CAGGGCAGATTTTACAGGCTGAATTATTGGCAGTATATGGAGCAGACCCAGGCACACAGGATTCTAGTGGGAAAA  
CTCCCGTTGATTATGCAAGGCAAGGAGGGCACCATGAGCTGGCAGAGCGCCTCGTGGAATACAGTATGAGCTAA  
CGGACAGACTAGCCTTCTATCTCTGTGGCAGGAAACCAGATCACAAAAATGGACAGCACTTTATAATACCTCAA  
TGGCAGACAGCAGCCTGGATTTGTCTGAATTGGCAAAAGCTGCTAAGAAGAACTTCAATCTCTAAGTAATCATT  
TGTTTGAAGAACTTGCCATGGATGTGTACGATGAAGTTGACAGGCGAGAGACGGATGCAGTCTGGCTTGCCACGC  
AAAACCACAGCGCCCTGGTAACCGAGACAACGCTCGTCCCTTTCTTCCGGTCAATCCTGAGTACTCATCAACAC  
GAAATCAGGGCAGACAGAAGTTAGCTCGGTTCAACGCCCATGAGTTTGCCACGCTGGTCATTGACATTCTCAGTG  
ACGCCAAGAGGAGACAGCAGGGCAGTTCTCTCTCGGGTTCAAAAGACAATGTGGAGCTCATACTGAAAACCATCA  
ATAACCAGCACAGCGTTGAGAGTCAAGACAACGATCAGCCCGACTATGACAGCGTGGCATCAGACGAAGACACAG  
ATTTGGAAACCACTGCAAGCAAAACAAACCGGCAGAGAGCCTAGATTAGATTTATCAGATGGACCACTGACTG  
TACAGGAATTTATGGAGGTCAAAACGCTCTAGTGGCTTCTGAGGCCAAGATACAGCAGCTAATGAAGGTGAATA  
ACAACCTTGAGTGACGAGCTGAGAATTATGCAGAAAAAGCTTCAAACTCCAGAGTGAAAAATTCGAACCTCAGGA  
AACAGGCCACAACCAATGTATATCAGGTGCAAACTGGTTCTGAGTACACAGACACTTCCAACCACTCTTCCTTAA  
AGAGACGTCCTGCTGCCCCGGGCGAGTAGGCCATGTCCATGTACGAGACCGGATCAGGTCAGAAACCATATCTCC  
CAATGGGAGAAGCGAGCCGCCCGAAGAGAGCAGGATGAGACTCCAGCCCTTCCCCGCGCACATCGGGAGGAGTG  
CACTTGTGACCTCCTCTTCTATCTCTGCCTTCCTTCCCCTCCACACTTTCCTGGTCGAGGGACGAAAGCGCCCGAA  
GGGCATCCAGGCTGGAGAAGCAGAACAGCACACCTGAGAGTGACTACGACAACACTCCCAACGACATGGAGCCAG  
ATGGCATGGGGTCAAGCCGAAAGGGACGGCAAAGAAGTATGGTGTGGCCAGGGGATGGCTTGGTACCAGACACAG  
CAGAACCCCATGTGGCCCCAAGCCCCACTCTCCCTAGCACCGAAGATGTCATCAGGAAGACTGAACAGATCACCA  
AAAACATACAGGAGCTCTTAAGAGCAGCCCAAGAAAAATAACATGACAGTTATATTCCCTGCTCAGAGAGGATAC  
ACGTAGCTGTTACAGAAATGGCAGCATTATTCCCCAAAAAACCAAGTCTGATATGGTGAGGACTTCCCTTCGTT  
TACTGACGTCCAGTGCCCTACCGACTGCAGTCAGAGTGCAAGAAGACCTCCAGGGGACCCCGGCTCACCCACAG  
ACGTTTCAGCTGGTCACGCAGCAGGTCATCCAGTGTGCGTACGACATCGCCAAGGCTGCCAAGCAGCTGGTTACCA  
TCACCACCAAAGAGAACAACAACTGCACAAGGGCAGGGCACCGCCTCCTCTGTTTTCTAGGCTTTATAAAGTCCAA  
TTTCAAATTCAGACGCAGAATCTTCAGATTTCTACAAAAAGAAACATTTAATGACGGTTTAAACTTTTTAAAA  
GAAAACTCAGTATTATTTTTGTCATGTTTTCTAACCAATTTTCAACTATTTAACCCACTTGCCCTATTTTTGTGCCT  
ATTTGCTGGTTTAGTTTCTGATGTTTCGGTTGTGTTGTCAACAACGTTGAGTTGATCACATACATCCAAAAGTAT  
AGTTTCATTGTCTAAAGTTTGTGAAAACTTTTCCATCCCTTAAACTCCCTGCCTATGGCTGAAACTATAAATGA  
AATTTTTATAAAAACATTTTCTTGAGAGAGTTAGTTAAAAAAGAAAAATCAGCGTCATTGTTCCCTGCCAAG  
CATCGTGCAATAAGTGAATTTCTTGCCCTACTTCATAATCTCTAAGTTTGGGGTATCTCCAAGCATGTATGTAGA  
GAAAGGACTTTGCCGCTTTTTAAACTAGTGTACAGTCTCTCTTGGGAGGAAACAATGAATTGGTTCAATTTCTT  
CTCAGTGTTTTACCCTGTTACATGTTCTGTTATTTAATGTTGTTATCTCAAGCTCCTATCTCTTGATGTTTTCTT  
GTCATCTTGAAGGCTCCATGGAATGAGATAAAGCATTGACCCACCACAGGACATCTCATGAAGCCATGTTACGGG  
TAGGAGCTCCACGCACATCACCCCACTTGTGAGGTGCTCTCCCTCACCCCTGTAAGCCAGACAGTTTGTTCAAA  
ACCTGCAGCAAAGAGAAGCATCAGTCTAACAAGCCAGAATCATTGTTGCCACCCATTAGGTATCACTACCAT  
GAACTATAGGGAAAGAAATCACCTACTCCCTGACACTGTGTTGTACCCTTCATCCAAAAGTCAGCTTGCTTCTC  
TGACCACTTACAGCTTCTCACATGAGTTGCTTCACATTTTTCATCATCTTAAGGACTTCTTATAAGGAAAGAT  
GTATCGTATCGCAGTCATCTGAGTTAGTTTCTCTCCATCACCTCATGAGTACTTAAAAATTAGACATCACTTT  
CAAGAGTTCCTTAGAGAGTGTGCTCTAGCTGGCTGCCTGCTACCCCAAAGCTCTGAAAGAGTAAGGTTGAAGTGC  
TGGAACATGCTCAGATTGTTTTTTAGTTACTCAAAAGCCCTTCTTGTCTGAATGTGAAAGCTCTTCCCGTTCC

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**FIGURE 3790B**

TGCTTACTGCAGCCATTCTGTGTGTGTGGTTTCAGACCCTGGCCTAGGGCCGGTGATGTGGATGAGTGAAGGGAGC  
CAGGTACACGGCAGCAGGGCAGAGGAGACTATGGGGAGCCCACCGCTACACAGTAGGGGCAGTAGCCCCAGCT  
CCACGCCTGTTGCCATGTGGAAAAGTGGGCCTAGGGTGGCCACAGCTTTGATTTTTCAAGAGACAAGAAACCTAG  
ATGTTTTTTGGTGCCATCTCTCCATTTATAAATGTTGGCAACCAATTTGAACACTTTTCAGAGACCATGTGCAGGT  
GAGCTGTGTCTCTAGGCTGCCAGCTCACAGCCCCACCCAGGGCCCTGTAAGCTGTGCAGTGTGAGGGCCTGG  
CTTCCCCGGACACACCTGGAGCAGCCTCTGAGTCTTACCCGTAATGGAGCCGGCCAACCCTGTGTGTTATGTTGC  
TGTGCTCTCTGTTTTTAACCATATGTTCTGTCCCATAGCAGTCATTACACATGTGAAGAAGACACAAGAATCAA  
AGTACAAGTTGCCTCAATACATGCTAATAACTAAGCTTCTATTTTCACAGGACTGATCGATGCACACCTTTATAG  
CTTGACCATATGCTGTCATGAAAGTAGCACCCCGACGGTGCTTGCTTTACTAAGTCACCGTGTGTGGATGCTTTT  
GTCGCATTTTGCTTCACTGTGAGTAGCATGGGAAAAGGGTCCACGTCTCCAAAAGACTCTTCCACTTGTTTTGTCC  
CACAGCCCTAAGTGCCACATTGCTGTTGGATGCTCCCGGGATGCCTTCTAGAAGGGGGCCTCCACCTTAAGTTC  
AGGCGCCATCTGATAGCCTTTTCTGTCAGGCTTCATGTCCTTAGCTGACCCTCCTTTATCTTGCAAACCCCTGCCC  
CTGCTGTCCCAGGGAGGACGGGCTTCTGTAGAGGCTTCTGGGAAATGAGCTGTCTGCAGGAGGTGAAGCAGTGT  
TTCCTTGGAATGTTTGAGGACCTGCAATAGAAGATGTTGCCTTTATGGCCCTAGAGAAAGTCAAGGAACATGGGG  
ACCAACAAAGCATTTCAGTTGTAAGAATATGTCAGAAGAGTGCTCGGTTAGCCCACGGTGCCAAAACCTCCAAAC  
AAGTTCCCCGGTGGAATGACGTGGCCATTGGAGGGCTGCAGGTCTCTCTCTGTATGTGCCCCGCGCATTTCCT  
TGGCCTCATCTGAGATCTGGTGTGAGAGTTCTCTGCTCCTGTGGCAAATCGCACCTTATCTGAACATTTGTTCC  
AGCCACCTTTTGCACATGGATTCCGTACCTTGCACTAGCAATGTCTACCTTCAGTAACGTCGTTCTTTTTCACCC  
TGTATTCTCAATGATCCCTTCTCTCCCATATGCCACCCTTCCCCCAAAGCTGATAGGGCAGAGGTGCACCTTTATG  
AAACTGGCACTTGACTGAACAGAAGGAAACAGCTGTACCTCTAAGCTCCTTTCACAGAAATCGTCATCTGCCTTG  
GAATGCAAATAGTTCTTATTGCCAAAGAACAGTGAATTGGGCCCAAAGATCAAACACAGCATTTCATGTAATCA  
GAATTCTAAACGCACAACCTCGGGAGCTGTGCACGGCTTCTCAAGTGATTGAGTTGCAGAACCAAGAGCAAAACTC  
GCCTGTTTTTGTCTCAATGGCACCCATGAGCTTCCAATAGTATAGTTTTCTTTCTTTCCITGTCTGGTTGAA  
GGTAACGTGTTCTAGAAAAGAAAATGCTGCATAGGAAAACGTAGATGCCTTTTATTCCAACGTGTTTGATCCCT  
GTCACCTATTATTCTGTACTTTTTATTGTACATTCTATTCTGTAATTATTGTGCCCTTTAAGTGTGTAAAATC  
GTTTTGGAATTTGTGCCTGCTAGTTATGCAATAACAGGCTCTACAAGTG

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**FIGURE 3791**

MSKRLRSSEVCADCSGPDPSWASVNRGTFLCDECCSVHRSIGRHISQVRHLKHTPWPTLLQMVETLYNNGANSI  
WEHSLDDPASIMSGRRKANPQDKVHPNKAEIFIRAKYQMLAFVHRLPCRDDDSVTAKDLSKQLHSSSVRTGNLETCL  
RLLSLGAQANFFHPEKGNTPLHVASKAGQILQAELLAVYGADPGTQDSSGKTPVDYARQGGHHELAERLVEIQYE  
LTDRLAFYLCGRKPDHKNQHFIIIPQADSSLDLSELAKAAKKKLQSLSNHLFEELAMDVYDEVDRRETDAVWLA  
TQNHSAVLTETTVVPFLPVNPEYSSTRNQGRQKLARFNAHEFATLVIDILSDAKRRQQGSSLSGSKDNVELILKT  
INNQHSVESQDNDQPDYDSVASDEDTDLETTASKTNRQKSLDSDLSGDPVTVQEFMEVKNALVASEAKIQQLMKV  
NNNLSDELIMQKKLQTLQSENSNLRKQATTNVYQVQTGSEYTDTSNHSSLKRRPSARGSRPMSMYETGSGQKPY  
LPMGEASRPEESRMRLQFPFAHIGRSALVTSSSSLPSFPSTLSWSRDESARRASRLEKQNSTPESDYDNTPNDE  
PDGMGSSRKGRQSRMVWPGDGLVPDTAEPHVAPSPTLPSTEDVIRKTEQITKNIQELLRAAQENKHDSYIPCSE  
IHVAVTEMAALFPPKPKSDMVRTSLRLLTSSAYRLQSECKKTLPGDPGSPTDVQLVTQQVIQCAVDIAKAAQLV  
TITTKENNN

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**FIGURE 3792A**

GAAGCGCCGCCACC GCCCCTTTGCTGTCCCCGGCCTCTAGTTCCCCGCAGGTGGGAGGTGGGAGCCATGT  
CGAAACGGCTCCGGAGCAGCGAGGTGTGCGTGA CTGCAGCGGGCCGGATCCTTCCTGGGCATCAGTAAATAGGG  
GAACGTTTTTATGTGATGAGTGCTGCAGTGCTCCATCGGAGTCTAGGGCGCCATATCTCCCAAGTGAGGCATCTGA  
AACACACACCGTGGCCTCCAACACTGCTTCAGATGGTTGAGACCTTGTATAATAACGGTGCTAACTCTATATGGG  
AGCATTCTTTGCTGGACCCTGCGTCTATTATGAGTGGAAGACGTAAAGCTAATCCACAGGATAAAGTACATCCCA  
ATAAAGCGGAATTCATCAGAGCCAAGTATCAGATGTTAGCGTTCGTCCATCGCTTGCCCTGCCGGGATGACGATA  
GTGTGACTGCCAAAGATCTTAGCAAGCAACTCCATTGAGCGTGAGAACAGGGAATCTTGAAACCTGTTGAGAC  
TGTTATCTTTAGGAGCACAAGCCAACCTTCTTTTCATCCTGAAAAAGGAAACACCCCACTCCATGTTGCCCTCCAAAG  
CAGGGCAGATTTTACAGGCTGAATTTATTGGCAGTATATGGAGCAGACCCAGGCACACAGGATTCTAGTGGGAAAA  
CTCCCGTTGATTATGCAAGGCAAGGAGGGCACCATGAGCTGGCAGAGCGCCTCGTGGAATACAGTATGAGCTAA  
CGGACAGACTAGCCTTCTATCTCTGTGGCAGGAAACCAGATCACAAAAATGGACAGCACTTTATAATACCTCAA  
TGGCAGACAGCAGCCTGGATTTGTCTGAATTTGGCAAAAGCTGCTAAGAAGAACTTCAATCTCTAAGTAATCATT  
TGTTTGAAGAACTTGCCATGGATGTGTACGATGAAGTTGACAGGCGAGAGACGGATGCAGTCTGGCTTGCCACGC  
AAAACCACAGCGCCTGGTAACCGAGACAACGGTCGTCCCTTTCTTCCGGTCAATCCTGAGTACTCATCAACAC  
GAAATCAGGGCAGACAGAAGTTAGCTCGGTTCAACGCCCATGAGTTTGCCACGCTGGTCATTGACATTCTCAGTG  
ACGCCAAGAGGAGACAGCAGGGCAGTTCTCTCTCGGGTTCAAAAGACAATGTGGAGCTCATACTGAAAACCATCA  
ATAACCAGCACAGCGTTGAGAGTCAAGACAACGATCAGCCCCGACTATGACAGCGTGGCATCAGACGAAGACACAG  
ATTTGGAAACCACTGCAAGCAAAACAAACCGGCAGAGCTTCAAACACTCCAGAGTGAAAAATCGAACCTCAGGA  
AACAGGCCACAACCAATGTATATCAGGTGCAAACTGGTTCTGAGTACACAGACACTTCCAACCACTCTTCTTAA  
AGAGACGTCCGTCTGCCCGGGCAGTAGGCCCATGTCCATGTACGAGACCGGATCAGGTCAGAAACCATATCTCC  
CAATGGGAGAAGCGAGCCGCCCGCAAGAGAGCAGGATGAGACTCCAGCCCTTCCCCGCGCAGCATCCAGGCTGG  
AGAAGCAGAACAGCACACCTGAGAGTGACTACGACAACACTCCCAACGACATGGAGCCAGATGGCATGGGGTCAA  
GCCGAAAGGGACGGCAAAGAAGTATGGTGTGGCCAGGGGATGGCTTGGTACCAGACACAGCAGAACCCCATGTGG  
CCCCAAGCCCCACTCTCCCTAGCACCGAAGATGTCATCAGGAAGACTGAACAGATCACCAAAAAACATACAGGAGC  
TCTTAAGAGCAGCCCCAAGAAAATAAACATGACAGTTATATCCCTGCTCAGAGAGGATACACAGTGTGTACAG  
AAATGGCAGCATTATTTCCCAAAAAACCAAGTCTGATATGGTGAGGACTTCCCTTCGTTTACTGACGTCCAGTG  
CCTACCGACTGCAGTCAGAGTGCAAGAAGACCCTCCAGGGGACCCCGGCTCACCCACAGACGTTTCAGCTGGTCA  
CGCAGCAGGTCATCCAGTGTGCGTACGACATCGCCAAGGCTGCCAAGCAGCTGGTTACCATCACCCACAAAGAGA  
ACAACAAC TGACAAGGGCAGGGCACCGCCTCTCTGTTTTCTAGGCTTTATAAAGTCCAATTTCAAATTCAGACG  
CAGAACTCTTCAGATTTCTACAAAAAGAACTTTAATGACGGTTTAAACTTTTAAAAAGAAACTCAGTATTA  
TTTTTGATGTTTTCTAACCAATTTTCAACTATTTAACCCTTGCCCTATTTTGTGCCTATTTGCTGGTTAGT  
TTCTGATGTTGCGTTGTGTGTCAACAACCTGTTGAGTTGATCACATACATCCAAAAGTATAGTTTCATTGTCTAA  
AGTTTGTGAAAACCTTTTCCATCCCTTAAACTCCCTGCCTATGGCTGAAACTATAAATGAAATTTTTCATAAAAC  
ATTTTCTTGAGAGAGTTCAGTTAAAAAAGAAAAATCAGCGTCATTGTTCCCTGCCAAGCATCGTGCAATAAGT  
GAATTTCTGGCCTACTTCATAATCTCTAAGTTTGGGGTATCTCCAAGCATGTATGTAGAGAAAGGACTTTGCCG  
CTTTTTAAACTAGTGTACAGTCTCTCTTGGGAGGAAACAATGAATTGGTTTCAATTTCTTCTCAGTGTTTTACCC  
TGTTACATGTTCTGTTATTTAATGTTGTTATCTCAAGCTCCTATCTCTTGATGTTTTCTTGTCTCTTGAAGGCT  
CCATGGAAATGAGATAAAGCATTGACCCACCACAGGACATCTCATGAAGCCATGTTTCAGGGTAGGAGCTCCACGCA  
CATCACCCCATTTGTCAGGTGCTCTCCCTCACCCCTGTAAGCCAGACAGTTTGTTCAAAACCTGCAGCAAAGAG  
AAGCATCAGTCTAACAAGCCAGAACTCATTTTGTGCCACCCATTTAGGTATCACTACCATGAACATATAGGGAAAA  
GAAATCACCTACTCCCTGACACTGTGTTGTACCTTCATCCAAAAGTCAGCTTGCTTCTCTGACCACTTACAGCT  
TTCTCACATGAGTTGCTTCACATTTTTCATCATCTTTAAGGACTTCTTATAAGGAAAGATGTATCGTATCGCAGT  
CATCTGAGTTAGTTTCTCTCCATCACCTCATGAGTACTTAAAAATTAGACATCAACTTTCAAGAGTTCCTTAGA  
GAGTGTGCTCTAGCTGGCTGCCTGCTACCCCAAAGCTCTGAAAGAGTAAGGTTGAAGTGCTGGAACATGCTCAGA  
TTGTTTTTGTAGTTACTCAAAGCCCTTCTTGTCTGAATGTGAAAGCTCTTCCCGTTCTGCTTACTGCAGCCA  
TTCTGTGTGTGGTTTCAACCTTGGCCTAGGGCCGGTGATGTGGATGAGTGAAGGGAGCCAGGTACACGGCAGC  
AGGGCAGAGGAGACTATGGGGAGCCACCGCCTACACAGTAGGGGCAGTAGCCCCAGCTCCACGCCTGTTGCCA  
TGTGGAAGTGGGCCTAGGGTGCCACAGCTTTGATTTTTCAAGAGACAAGAAACCTAGATGTTTTTGGTGCC

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**FIGURE 3792B**

ATCTCTCCATTTATAAATGTTGGCAACCAATTTGAACACTTTCAGAGACCATGTGCAGGTGAGCTGTGTCTCTA  
GGCTGCCAGCTCACAGCCCCACCCAGGGCCCTGTAAGCTGTGCAGTGTGAGGGCCTGGCTTCCCCGGACACAC  
CTGGAGCAGCCTCTGAGTCTTACCCGTAATGGAGCCGGCCAACCCCTGTGTGTTATGTTGCTGTGCTCTCTGTTTT  
TAACCATATGTTCTGTCCCATAGCAGTCATTACACATGTGAAGAAGACACAAGAATCAAAGTACAAGTTGCCTC  
AATACATGCTAATAACTAAGCTTCTATTTTACAGGACTGATCGATGCACACCTTTATAGCTTGACCATATGCTG  
TCATGAAAGTAGCACCCCGACGGTGCTTGCTTTACTAAGTCACCGTGTGTGGATGCTTTTGTGCGATTTTGCTTC  
ACTGTGAGTAGCATGGGAAAAGGGTCCACGTCTCCAAAAGACTCTTCCACTTGTTTGTCCACAGCCCTAAGTGC  
CACATTGCTGTTGGATGCTCCCGGGATGCCTTCTAGAAGGGGGCCTCCACCTTAAGTTTCAGGCGCCATCTGATA  
GCCTTTTCTGCAGGCTTCATGTCTTAGCTGACCCCTCCTTTATCTTGCAAACCCCTGCCCTGTGTCCAGGGA  
GGACGGGCTTCTGTAGAGGCTTCTGGGAAATGAGCTGTCTGCAGGAGGTGAAGCAGTGTTCCTTGGAATGTTT  
GAGGACCTGCAATAGAAGATGTTGCCTTTATGGCCCTAGAGAAAGTCAAGGAACATGGGGACCAACAAAGCATTT  
CCAGTTGTAAGAATATGTCAGAAGAGTGCTCGGTTAGCCACGGTGCCAAAACCTCCAAACAAGTTCCCCGGTGGA  
ATGACGTGGCCATTGGAGGGCTGCAGGTCGCTCTCTGTATGTGCCCCGCGCATTTTCCTTGGCCTCATCTGAGA  
TCTGGTGTGAGAGTTCTCTGCTCCTGTTGGCAAATCGCACCTTATCTGAACATTTGTTCCAGCCACCTTTTGCAC  
ATGGATTCCGTACCTTGCACTAGCAATGTCTACCTTCAGTAACGTCGTTCTTTTACCCTGTATTCTCAATGAT  
CCCTTCCCTCCCCATATGCCACCTTCCCCCAAAGCTGATAGGGCAGAGGTGCACCTTATGAACTGGCACTTGAC  
TGAACAGAAGGAAACAGCTGTACCTCTAAGCTCCTTTCACAGAAATCGTCATCTGCCTTGGAATGCAAAATAGTTC  
TTATTTGCCAAAGAACAGTGAATTGGGCCCCAAAGATCAAACACAGCATTTTCATGTAATCAGAATTCTAAACGCAC  
AACTCGGGAGCTGTGCACGGCTTCTCAAGTGATTGAGTTGCAGAACCAAGAGCAAACTCGCCTGTTTTGTCTT  
CAATGGCACCCATGAGCTTCCAATAGTATAGTTTTCTTTCTTTCCTTGCTCGGTTGAAGGTAACGTGTTCTTA  
GAAAAGAAAATGCTGCATAGGAAAAGTGAATGCCTTTTATCCAACGTGTTTGATCCCTGTCACTCATTATTCT  
GTACTTTTTATTGTACATTCTATTCTGTAAATTATTGTGCCCTTTAAGTGTTGTAAATCGTTTTGGAATTTGTG  
CCTGCTAGTTATGCAATAAACAGGCTCTACAAGTG

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**FIGURE 3793**

MSKRLRSSEVCADCSGPDPSWASVNRGTFLCDECCSVHRSLGRHISQVRHLKHTPWPPPTLLQMVELTYNNGANSI  
WEHSLDPASIMSGRRKANPQDKVHPNKAEFIRAKYQMLAFVHRLPCRDDDSVTAKDLSKQLHSSVRTGNLETCL  
RLLSLGAQANFFHPEKGNTPLHVASKAGQILQAELLAVYGADPGTQDSSGKTPVDYARQGGHHELAERLVEIQYE  
LTDRLAFYLCGRKPDHKNQGHFIIPQMADSSLDLSELAKAAKKLQSLSNHLFEELAMDVYDEVDRRETDAVWLA  
TONHSALVTETTVPFLPVNPEYSSTRNQGRQKLARFNAHEFATLVIDILSDAKRRQQGSSLGSKDNVELILKT  
INNQHSVESQDNDQPDYDSVASDEDTDLETTASKTNRQKLQTLQSENSNLKQATTNVYQVQTGSEYTDTSNHSS  
LKRRPSARGSRPMSMYETGSGQKPYLPMGEASRPEESRMRLQPPPAHASRLEKQNSTPESDYDNTPNDEPDGMG  
SSRKGRQRSMVWPGDGLVPDTAEPHVAPSPTLPSTEDVIRKTEQITKNIQELLRAAQENKHDSYIPCSERIHVAV  
TEMAALFPKKPKSDMVRTSLRLLTSSAYRLQSECKKTLPGDPGSPTDVQLVTQQVIQCAYDIAKAAKQLVTITTK  
ENNN

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**FIGURE 3794**

GGCACGAGGGTTGCTTTTATACTCAGAATGGAAATACCTGATCTTGGCTAGTTTTGTTATAAGATATTGATTTC  
TTTAGATTTCCCTCCACGAGGTCAGCAAATATCATGTTCTTATGTAACTTAGGCCAAGGCCAGAGTTATCATA  
GTCCCTAGGTTGCTACGGCTTATCATGTGCTTGGTAAAAGGTGATCGCAGGTTCTCAGACGAGTTTACTTTACAT  
GAGATGGAATCAGGCAGAGAGGCTGGGATGATGGAGAAAGCTCGAGGTGAAGTTTTAAAAAAAAGTTGTGGAAA  
GGAAAGTTCCAAAGAGGTGGTTTCTGAGGAAGTCAGAGCGCCAGGGCCAGAGCAGTCAGTAATGGGTGAATGAG  
GTTGTTTGGAAAGTCGGTGTGACAGACACATGGAATGCCATCTACTTCTAGGTTGCTGGTGGGTATTAAATATGCA  
CAATATCCATAGCTCACTGAGGATTTTAAAATTATAAGCATAGGATTTTATATTTTGGGGTGAAAGAATTATCT  
GGCACATTAGGTATTGGAGTTTAAAAAAAAGCCAAATTTACAGTCCTTAATAACTTTTTTAAAAAAAACATAA  
AGGCGCTTCATGTCCAGTGTGTGGCCCTTCTGAAACTTATGGTCATCTCTCCCACTGAAACCAAGGTCTTTTCAA  
ATGTGGCTAAATGGGGATGAGGAGACACGGGTAGGACTTTCTTGGTGTGTGTGCATTCTTTAAAGAGCCAAGTTG  
CTTCGGGGAAACAGCCAGGAAAATGGTCAAGATTATTTTTAGAGGTTATTTTATTGGGGATTTTAAAGAACTAATA  
ACATCTTGAGTTATTTTTAATTCAGGGGGATGTGGAAAGGTTTGCAATTGTCAAGTGTTTGTGTAGCTTAGTA  
TCCATAAGGGAAACTTAGACTATAGACATAACTACAAAGCCAGTGCAGCTTTTGTCTGTATGTTGTGGGGG  
ATCAACTTTCACACATAGCAAGCACATGGCCTCCCTGATGTGAGGATGCCTTTGTTAGGATCTGTATTGCCCCTT  
AATTTTGTGAAATCTTTTTTCTTCTTCTTCTTGAAGTTCCAAAATATAGTTTATTGTATCTTTCATCACTA  
AAAATTTGTTCCTTTTTTCACTATGGGCAGTTCACACAAGGCAAAAACCTATTGAACAGTTGGTTTTAGTGTGTGT  
ATAACTTTGCTGTATATCAAACTAATTTTGACAAGTTTTTCATCCTAAGCCTCAAATCATGTAATTAATAATTTGC  
CTGTTTATTTATGACCTAATTGTGATTCTTTTATTAATAAAAGCTAATGGGAAAAGGATCCCTGATTAAAGCTGAT  
GACTAGACCTACAATTAATTTCTGAGTATATGAAGTATTGTACCAGAGTATTAAAAGATATGTAATATTTTA  
TTGATAAATCTATCCTTTAAAAGGAATACGTTTTAGGATGTCATCATTTTGTATGTGAATCATGTAAATGTGATA  
ATATGCTGTTTATTATACATTTAGTGTTTCAAGAGATTCATTAATTGCCTTTTTGCCACGTATATTATGTAGT  
CTATTTGCAACTGTTCTTAAAAAATGACATTAAGAAGATAGTTTATGTAGAGAAACATTAGTGGATGTTAATTG  
TCTCCCCACCTATATTTATGGGTGTTAGCGCAACTGCTTTGCTAGTTGCAAAGCTGTATTATCAGAGTAAAAGTG  
TATTTGTAACTGTATGGGAATAAAAATTAGGAATAAAACCATTTTCTTATAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 3795**

MCLVKGDRRFSDEFTLHEMESGREAGMMEKARGEVLKKKLWKGKFQRGGF

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**FIGURE 3796A**

GCCCTGCTTCCCCTTGACCTGCGCCGGGCGGCCATGGACTTGTACAGCACCCCGGCCGCTGCGCTGGACAGGTT  
CGTGGCCAGAAGGCTGCAGCCGCGGAAGGAGTTTCGTAGAGAAGGCGCGGCGCGCTCTGGGCGCCCTGGCCGCTGC  
CCTGAGGGAGCGCGGGGCGCCCTCGGTGCTGCTGCCCCGCGGGTGTGAAAACCTGTCAAGGGAGGCTCCTCGGG  
CCGGGGCAGAGCTCTCAAGGGTGGCTGTGATTCTGAACCTTGTATCTTCCCTCGACTGCTTCAAGAGCTATGTGGA  
CCAGAGGGCCCGCGTGCAGAGATCCTCAGTGAGATGCGGGCATCGCTGGAATCCTGGTGGCAGAACCCAGTCCC  
TGGTCTGAGACTCACGTTTCTGAGCAGAGCGTGCCTGGGGCCCTGCAGTTCGCGCTGACATCCGTAGATCTTGA  
GGACTGGATGGATGTTAGCCTGGTGCCTGCCCTCAATGTCCTGGGTGAGGCCGGCTCCGGCGTCAAACCCAAGCC  
ACAAGTCTACTCTACCTCCTCAACAGTGGCTGCCAAGGGGGCGAGCATGCGGCCTGCTTCACAGAGCTGCGGAG  
GAACCTTGTGAACATTGCCCCAGCCAAGTTGAAGAACCTAATCTTGCTGGTGAAGCACTGGTACCACCAGGTGTG  
CCTACAGGGGTGTGTGAAGGAGACGCTGCCCCGGTCTATGCCCTGGAATTGCTGACCATCTTCGCTGGGAGCA  
GGGTGTGAAGAAGGATGCTTCAGCCTAGCCGAAGGCCTCCGAACCTGTCTGGGCTGATCCAACAGCATCAGCA  
CCTGTGTGTTTTCTGGACTGTCAACTATGGCTTCGAGGACCTGCAGTTGGGCAGTTCTTGCAGCGGCAGCTTAA  
GAGACCCAGGCCTGTGATCCTGGACCCAGCTGACCCACATGGGACCTGGGGAATGGGGCAGCCTGGCACTGGGA  
TTTGCTAGCCAGGAGGCAGCATCCTGCTATGACCACCCATGCTTTCTGAGGGGGATGGGGGACCCAGTGCAGTC  
TTGGAAGGGGCGGGGCTTCCACGTGCTGGATGCTCAGGTTTGGGCCACCCCATCCAGCTAGACCCTAACAGAA  
GACCCCTGAAAACAGCAAGAGCCTCAATGCTGTGTACCCAAGAGCAGGGAGCAAACCTCCCTCATGCCAGCTCC  
TGGCCCCACTGGGGCAGCCAGCATCGTCCCTCTGTGCCGGGAATGGCCTTGGACCTGTCTCAGATCCCCACCAA  
GGAGCTGGACCGCTTCATCCAGGACCACCTGAAGCCGAGCCCCAGTTCCAGGAGCAGGTGAAAAAGGCCATTGA  
CATCATCTTGCCTGCCCTCCATGAGAAGTGTGTTCAAGGCCCTCAAGAGTCAGTAAAGGGGGCTCATTGGCCG  
GGGCACAGACCTAAGGGATGGCTGTGATGTTGAACCTCATCATCTTCTCACTGCTTCACGGACTACAAGGACCA  
GGGGCCCCGCGCGCAGAGATCCTTGATGAGATGCGAGCGCAGCTAGAATCCTGGTGGCAGGACCAGGTGCCAG  
CCTGAGCCTTCAGTTTCTGAGCAGAATGTGCCTGAGGCTCTGCAGTTCCAGCTGGTGTCCACAGCCCTGAAGAG  
CTGGACGGATGTTAGCCTGCTGCCTGCCCTCGATGCTGTGGGGCAGCTCAGTTCTGGCACCAACCAATCCCCA  
GGTCTACTCGAGGCTCCTCACCAGTGGCTGCCAGGAGGGCGAGCATAAGGCCTGCTTCGCAGAGCTGCGGAGGAA  
CTTCATGAACATTGCCCCGTGCAAGCTGAAGAACCTGATTCTGCTGGTGAAGCACTGGTACCGCCAGGTGCGGC  
TCAGAACAAAGGAAAAGGACCAGCCCTGCCTCTCTGCCCCAGCCTATGCCCTGGAGCTCCTCACCATCTTTGC  
CTGGGAGCAGGGCTGCAGGCAGGATTGTTTCAACATGGCCCAAGGCTTCCGACGGTGTGGGGCTCGTGCAACA  
GCATCAGCAGCTCTGTGTCTACTGGACGGTCAACTATAGCACTGAGGACCCAGCCATGAGAATGCACCTTCTTGG  
CCAGCTTCGAAAACCCAGACCCCTGGTCTTGACCCCGCTGATCCACCTGGAACGTGGGCCACGGTAGCTGGGA  
GCTGTTGGCCCAGGAAGCAGCAGCGCTGGGGATGCAGGCCTGCTTTCTGAGTAGAGACGGGACATCTGTGCAGCC  
CTGGGATGTGATGCCAGCCCTCCTTTACCAAACCCAGCTGGGGACCTTGACAAGTTTATCAGTGAATTTCTCCA  
GCCAACCCGACGTTCTTGCCCCAGGTGAACAAGGCCGTTGATACCATCTGTTCATTTTTGAAGGAAAACCTGCTT  
CCGGAATTTCTCCCATCAAAGTGATCAAGGTGGTCAAGGGTGGCTCTTCAGCCAAAGGCACAGCTCTGCGAGGCCG  
CTCAGATGCCGACCTCGTGGTGTTCCTCAGCTGCTTCAGCCAGTTCACTGAGCAGGGCAACAAGCGGGCCGAGAT  
CATCTCCGAGATCCGAGCCAGCTGGAGGCATGTCAACAGGAGCGGCAGTTTCGAGGTCAAGTTTGAAGTCTCCAA  
ATGGGAGAAATCCCCGCTGCTGAGCTTCTCACTGACATCCAGACGATGCTGGACCAGAGTGTGGACTTTGATGT  
GCTGCCAGCCTTTGACGCCCTAGGCCAGCTGGTCTCTGGCTCCAGGCCAGCTCTCAAGTCTACGTGACCTCAT  
CCACAGCTACAGCAATGCGGGCAGTACTCCACCTGCTTACAGAGCTACAACGGGACTTCATCATCTCTCGCCC  
TACCAAGCTGAAGAGCCTGATCCGGCTGGTGAAGCACTGGTACCAGCAGTGTACCAAGATCTCCAAGGGGAGAGG  
CTCCCTACCCCCACAGCAGGGCTGGAACCTCTGACTGTGTATGCCTGGGAGCAGGGCGGGAAGGACTCCAGTT  
CAACATGGCTGAGGGCTTCCGCACGGTCTGGAGCTGGTACCCAGTACCGCCAGCTCTGTATCTACTGGACCAT  
CAACTACAACGCCAAGGACAAGACTGTGGAGACTTCTGAAACAGCAGTTTCAAGGCCAGGCCCTATCATCCT  
GGATCCGGCTGACCCGACAGGCAACCTGGGCCACAATGCCCGCTGGGACCTGCTGGCCAAGGACTGCAGCCTG  
CACATCTGCCCTGTGCTGCATGGGACGGAATGGCATCCCATCCAGCCATGGCCAGTGAAGGTGCTGTGTGAAG  
TTGAGAAAATCAGCGGTCTACTGGATGAAGAGAAGATGGACACCAGCCCTCAGCATGAGGAAATTCAGGGTCCC  
CTACCAGATGAGAGAGATTGTGTACATGTGTGTGTGAGCACATGTGTGCATGTGTGTGCACACGTGTGCATGTGT  
GTGTTTTAGTGAATCTGCTCTCCAGCTCACACACTCCCTGCCTCCCATGGCTTACACACTAGGATCCAGACTC  
CATGGTTTGACACCAGCCTGCGTTTGCAGCTTCTCTGTCACTTCCATGACTCTATCCTCATACCACCACTGCTGC

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**FIGURE 3796B**

TTCCACCCAGCTGAGAATGCCCCCTCCTCCCTGACTCCTCTCTGCCCATGCAAATTAGCTCACATCTTCTCTCC  
TGCTGCAATCCATCCCTTCTCTCCATTGGCCTCTCCTTGCCAAATCTAAATAGTTTATATAGGGATGGCAGAGAG  
TTCCCATCTCATCTGTGAGCCACAGTCATTTGGTACTGGCTACCTGGAGCCTTATCTTCTGAAGGGTTTAAAGA  
ATGGCCAATTAGCTGAGAAGAATTATCTAATCAATTAGTGATGTCTGCCATGGATGCAGTAGAGGAAAGTGGTG  
TACAAGTGCCATGATTGATTAGCAATGTCTGCACTGGATACGGAAAAAGAAGGTGCTTGCAGGTTTACAGTGTA  
TATGTGGGCTATTGAAGAGCCCTCTGAGCTCGGTTGCTAGCAGGAGAGCATGCCCATATTGGCTTACTTTGTCTG  
CCACAGACACAGACAGAGGGAGTTGGGACATGCATGCTATGGGGACCCCTCTTGTGGACACCTAATTGGATGCCT  
CTTCATGAGAGGCCTCCTTTTCTTACCTTTTATGCTGCACTCCTCCCTAGTTTACACATCTTGATGCTGTGGC  
TCAGTTTGCTTCTGAATTTTTATTGGGTCCCTGTTTTCTCTCTTAACATGCTGAGATTCTGCATCCCCACAGC  
CTAAACTGAGCCAGTGGCCAAACAACCGTGCTCAGCCTGTTTTCTCTCTGCCCTCTAGAGCAAGGCCACCCAGGTC  
CATCCAGGAGGCTCTCCTGACCTCAAGTCCAACAACAGTGTCACACTAGTCAAGGTTAGAGCCAGAAAACAGAA  
AGCACTCTAGGAATCTTAGGCAGAAAGGGATTTTATCTAAATCACTGGAAAGGCTGGAGGAGCAGAAGGCAGAGG  
CCACCACTGGACTATTGGTTTTCAATATTAGACCACTGTAGCCGAATCAGAGGCCAGAGAGCAGCCACTGCTACTG  
CTAATGCCACCCTACCCCTGCCATCACTGCCCCACATGGACAAAACCTGGAGTCGAGACCTAGGTTAGATTCTCTG  
CAACCACAAACATCCATCAGGGATGGCCAGCTGCCAGAGCTGCGGGAAGACGGATCCCACCTCCCTTTCTTAGCA  
GAATCTAAATTACAGCCAGACCTCTGGCTGCAGAGGAGTCTGAGACATGTATGATTGAATGGGTGCCAAGTGCCA  
GGGGGCGGAGTCCCCAGCAGATGCATCCTGGCCATCTGTTGCGTGGATGAGGGAGTGGGTCTATCTCAGAGGAAG  
GAACAGGAAACAAAGAAAGGAAGCCACTGAACATCCCTTCTCTGCTCCACAGGAGTGCCTTAGACAGCCTGACTC  
TCCACAAACCCTGTTAAAACCTTACCTGCTAGGAATGCTAGATTGAATGGGATGGGAAGAGCCTTCCCTCATTAT  
TGTCATTCTTGGAGAGAGGTGAGCAACCAAGGGAAGCTCCTCTGATTACCTAGAACCTGTTCTCTGCCGTCTTT  
GGCTCAGCCTACAGAGACTAGAGTAGGTGAAGGGACAGAGGACAGGGCTTCTAATACCTGTGCCATATTGACAGC  
CTCCATCCCTGTCCCCCATCTTGGTGCTGAACCAACGCTAAGGGCACCTTCTTAGACTCACCTCATCGATACTGC  
CTGTAATCCAAAGCTAGAACTCTCAGGACCCCAACCTCCACCTCTTGGATTGGCCCTGGCTGCTGCCACACACA  
TATCCAAGAGCTCAGGGCCAGTTCTGGTGGGCAGCAGAGACCTGCTCTGCCAAGTTGTCCAGCAGCAGAGTGGCC  
CTGGCCTGGGCATCACAGCCAGTGATGCTCTGGGAAGACCAGGTGGCAGGTGCGAGTTGGGTACCTTCCATT  
CCACCACACAGACTCTGGGCTCCCCGCAAAATGGCTCCAGAATTAGAGTAATTATGAGATGGTGGGAACCAGAG  
CAACTCAGGTGCATGATACAAGGAGAGGTTGTCTCTGGGTAGGGCAGAGAGAGGGCTTGCTCATCTGAACAGG  
GGTGATTTTCAATCCAGGCCCTCAGTCTTTGGCAATGGCCACCCTGGTGTGGCATATTGGCCCCACTGTAACTT  
TTGGGGGCTTCCCGTCTAGCCACACCCCTCGGATGGAAAGACTTGACTGCATAAAGATGTCAGTTCTCCCTGAGT  
TGATTGATAGGCTTAATGGTCACCCTAAAAACACCCACATATGCTTTTCGATGGAACCAGGTAAGTTGACGCTAA  
AGTTCTTATGGAAAAATACACACGCAATAGCTAGGAAAAACACAGGGAAGAAGAGTTCTGAGCAGGGCCTAGTCT  
TAGCCAATATTAAACATACTATGAAGCCTCTGATACTTAAACAGCATGGCGCTGGTACGTAAATAGACCAATGC  
AGTTAGGTGGCTCTTTCCAAGACTCTGGGGAAAAAGTAGTAAAAAGCTAAATGCAATCAATCAGCAATTGAAAG  
CTAAGTGAGAGAGCCAGAGGGCCTCCTTGGTGGTAAAAGAGGTTGCATTTCTTGACGCCAGAAGGCAGAGAAAG  
TGAAGACCAAGTCCAGAACTGAATCCTAAGAAATGCAGGACTGCAAAGAAATTGGTGTGTGTGTGTGTGTGTGTG  
TGTGTGTGTGTGTGTTAATTTTAAAAAGTTTTATT

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**FIGURE 3797**

CGGCAGCCAGCTGAGAGCAATGGGAAATGGGGAGTCCCAGCTGTCTCGGTGCCTGCTCAGAAGCTGGGTTGGTT  
TATCCAGGAATACCTGAAGCCCTACGAAGAATGTCAGACACTGATCGACGAGATGGTGAACACCATCTGTGACGT  
CCTGCAGGAACCCGAACAGTTCCCCCTGGTGCAGGGAGTGGCCATAGGTGGCTCCTATGGACGGAAAACAGTCTT  
AAGAGGCAACTCCGATGGTACCCTTGTCTCTTCTTCAGTGACTTAAAACAATTCCAGGATCAGAAGAGAAGCCA  
ACGTGACATCCTCGATAAACTGGGGATAAGCTGAAGTTCTGTCTGTTACGAAGTGGTTGAAAAACAATTTCGA  
GATCCAGAAGTCCCTTGATGGGTTACCATCCAGGTGTTACAAAAATCAGAGAATCTCTTTTCGAGGTGCTGGC  
CGCCTTCAACGCTCTGAGCTTAAATGATAATCCAGCCCCCTGGATCTATCGAGAGCTCAAAGATCCTTGGATAA  
GACAAATGCCAGTCTGTGAGTTTGCAGTCTGCTTCACTGAATCCAGCAGAAGTTTTTGGACAACCGTCTCTGG  
AAAATAAGGATTTGATCTCTTGATAAAGCACTGGCATCAACAGTGCCAGAAAAAATCAAGGATTACCCCTC  
GCTGTCTCCGTATGCCCTGGAGCTGCTTACGGTGTATGCCTGGGAACAGGGGTGCAGAAAAGACAACCTTGACAT  
TGCTGAAGGCGTCAGAACCCTACTGGAGCTGATCAATGCCAGGAGAAGCTGTGTATCTATTGGATGGTCACTA  
CAACTTTGAAGATGAGACCATCAGGAACATCCTGCTGCACCAGCTCCAATCAGCGAGGCCAGTAATCTTGGATCC  
AGTTGACCCAACTAATAATGTGAGTGGAGATAAAATATGCTGGCAATGGCTGAAAAAGAAGCTCAAACCTGGTT  
GACTTCTCCCAACCTGGATAATGAGTTACCTGCACCATCTTGGAAATGTTCTGCCTGCACCACTCTTCAGACCCC  
AGGCCACCTTCTGGATAAGTTCATCAAGGAGTTTCTCCAGCCCAACAAATGCTTCTAGAGGAGATTGACAGTGC  
TGTTAATCATCATCCGTACATTCTTAAAGAAAATGCTTCCGACAATCAACAGCCAAGATCCAGATTGTCCGGGG  
AGGATCAACCGCCAAAGGCACAGCTCTGAAGACTGGCTCTGATGCCGATCTCGTCTGTCTCCATAACTCACTAA  
AAGCTACACCTCCCAAAAAACGAGCGGCACAAAATCGTCAAGGAAATCCATGAACAGCTGAAAGCCTTTTGAG  
GGAGAAGGAGGAGGAGCTTGAAGTCAGCTTTGAGCCTCCCAAGTGAAGGCTCCAGGGTGTGAGCTTCTCTCT  
GAAATCCAAAGTCTCAACGAAAGTGTGAGCTTTGATGTGCTTCTGCCTTTAATGCACTGGGTGAGCTGAGTTC  
TGGCTCCACACCCAGCCCCGAGGTTTATGCAGGGCTCATTGATCTGTATAAATCCTCGGACCTCCCGGAGGAGA  
GTTTTCTACCTGTTTACAGTCTGTCAGCGAACTTCATTGCTCCCGGCCACCAAACTAAAGGATTTAATTCG  
CCTGGTGAAGCACTGGTACAAAGAGTGTGAAAGGAACTGAAGCCAAAGGGGTCTTTGCCCCCAAAGTATGCCTT  
GGAGCTGCTCACCATCTATGCCTGGGAGCAGGGGAGTGGAGTGCCGATTTTGACACTGCAGAAGGTTTCCGGAC  
AGTCTTGGAGCTGGTCACACAATATCAGCAGCTCTGCATCTTCTGGAAGGTCAATTACAACCTTGAAGATGAGAC  
CGTGAGGAAGTTTCTACTGAGCCAGTTGCAGAAAACAGGCCTGTGATCTTGGACCCAGCCGAACCCACAGGTGA  
CGTGGGTGGAGGGGACCGTTGGTGTGGCATCTTCTGGCAAAAGAAGCAAAGGAATGGTTATCCTCTCCCTGCTT  
CAAGGATGGGACTGGAAACCAATACCACCTTGGAAAGTGCCGACAATGCAGACACCAGGAAGTTGTGGAGCTAG  
GATCCATCCTATTGTCAATGAGATGTTCTCATCCAGAAGCCATAGAATCCTGAATAATAATTCTAAAAGAACTT  
CTAGAGATCATCTGGCAATCGCTTTTAAAGACTCGGCTCACCGTGAGAAAGAGTCACTCACATCCATTCTTCCCT  
TGATGGTCCCTATTCTCCTTCCCTTGCTTCTTGGACTTCTGAAATCAATCAAGACTGCAAACCTTTTCATAAA  
GTCTTGCTTGTGTAATCCCTCTCTGCAGGCAGCCTGCCCTTAAAAATAGTTGCTGTCTATCCACTTTATGTGCA  
TCTTATTTCTGTCAACTTGTATTTTTTTCTGTATTTTTCCAATTAGCTCCTCCTTTTTCTTCCAGTCTAAAA  
AAGGAATCCTCTGTGCTTCAAAGCAAAGCTCTTACTTTCCCTTGGTCTCATAACTCTGTGATCTTGTCTC  
GGTGTTCCTCAACTCATCCAGTCTGTCTGTTTCTCTGTATACAAAACCTTTCTGCCCCTGTGACACAGACA  
TCCTCTATGCCAGCAGCCAGCCAACCTTTTATTAGAATCAAGCTCTCCAAAGGCTCAGATTATAACTGTTGT  
CATATTATATGAGGCTGTGTCTTTTCTTCTGAGCCTGCCCTTCTCCCCCCCCACCCAGGAGTATCCTCTTGCC  
AAATCAAAAGACTTTTTCTTGGGCTTTAGCCTTAAAGATACTGAAGGTCTAGGTGCTTTAACCTCACATACCC  
TCACTTAAACTTTTATCACTGTTGCATATACCAGTTGTGATACAATAAAGAAATGTATCTGG

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**FIGURE 3798**

AGTGAGAGGGTCCAAGCCTGGTAAGAATGTCCAGCTTCAGGAGAATGAAATCAGAGGACTGTGCTTAAAGTCTCG  
TGAAATCTTTCTCAGTCAGCCTATCCTACTAGAACTTGAAGCACCCTCAAAATATGTGGTGACATCCATGGACA  
ATACTATGATTTGCTGCGACTTTTGTAGTACGGTGGTTTCCCACCAGAAAGCAACTACCTGTTTCTTGGGGACTA  
TGTGGACAGGGGAAAGCAGTCATTGGAGACGATCTGCCTCTTACTGGCCTACAAAATAAAATATCCTGAGAATTT  
TTTTCTTCTCAGAGGGAACCATGAATGTGCCAGCATCAACAGAATTTATGGATTTTATGATGAATGTAAAAGAAG  
ATACAACATTAAACTATGGAAAACTTTCACAGACTGTTTTAACTGTTTACCGATAGCAGCCATCGTGGATGAGAA  
GATATTCTGCTGTCATGGAGGTTTATCACCAGATCTTCAATCTATCGAGCAGATTTCGGCGAATTATGCGACCAAC  
TGATGTACCAGATCAAGGTCTTCTTTGTGATCTTTTGTGGTCTGACCCCGATAAAGATGTCCTTAGGCTGGGGTGA  
AAATGACAGAGGAGTGTCCTTCACATTTGGTGCAGAAAGTGGTTGCAAAATTTCTCCATAAGCATGATTTGGATCT  
TATATGTAGAGCCCATCAGGTGGTTGAAGATGGATATGAATTTTTTGCAAAGAGGCAGTTGGTCACTCTGTTTTC  
TGCGCCCAATTATTGCGGAGAGTTTGACAATGCAGGTGCCATGATGAGTGTGGATGAAACACTAATGTGTTCTTT  
TCAGATTTTAAAGCCTGCAGAGAAAAAGAAGCCAAATGCCACGAGACCTGTAACGCCTCCAAGGGTTGCATCAGG  
CCTGAACCCGTCCATTACAGAAAGCTTCAAATTATAGAAACAATACTGTTCTATACGAGTGAACCGATTATGCTTTC  
TTTGGCCTACATTCTTTATTCTGCGGTGAAGTTGAGGCTTATAAGTTAAAACAAAGGAAGTAACCTTACTGTCCAC  
CAGTTTATACAGAACTCACAGTACCTATGACTTTTTTAACTAAGATCTGTAAAAAAGAAATCTGTTTCAACAG  
ATGACCGTGTACAATACCGTGTGGTGAAAATGAATTCAGACTTATTAAATGATGAACTTGTT

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**FIGURE 3799**

MEQIRRIMRPTDVPDQGLLCDLLWSDPKDVLGWGENDRGVSFTFGAEVVAKFLHKHDLDLICRAHQVVEDGYEF  
FAKRQLVTLFSAPNYCGEFDNAGAMMSVDETL MCSFQILKPAEKKKPNATRPVTPPRVASGLNPSIQKASNYRNN  
TVLYE

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**FIGURE 3800**

TCCTCTAATTGGGACTCCGAGCCAGGGCTATTTCTCGCGCTGGCGCGGTTCCAAGAAGCATCCCAGCCATCACTC  
TTTCACCTGCTCCTTAGAGAAGGGAAGATGAGCGAGTCGAGCTCGAAGTCCAGCCAGCCCTTGGCCTCCAAGCAG  
GAAAAGGAGGGCACTGAGAAGCGGGGCCGGGGCAGGCCGCGCAAGCAGCCTCCGATGAGTCCTGGGACAGCGCTT  
GTAGGGAGTCAGAAGGAGCCCAGCGAAGTGCCAACACCTAAGAGACCTCGGGGCCAACCAAGGGGAAGCAAAAAC  
AAGGGTGCCGCCAAGACCCGGAACACCATAACTCCAGGAAGGAAACCAAGGGGCAGACCAAAAACTGGAG  
AAGTAGGAAGAGGAGGGCATCTCGCAAGAGTCTCGGAGGAGGAGCAGTGAACCGTGCCTGCCCTGCTCCTCA  
CTGGAGGAGCAGCTGCCTTCTGGGACTGGACAGCTTTGCTCCGCTCCCACCGCCCTCGCCCTTCCGAGGCCCA  
CCATCACCACCGCCTCTGGCCGCCACCCCATCTTCCACCTGTGCCACACCACACTACGCAGCACACCAGC  
CACTGCAGGGCTCCCATGGGCTGAGTGGGGAGCAGTTTTCCCTGGCCTCAGTTCACAGCTCCCCCGCCACCC  
ACGCATACACACATGCCCTCCTGGACAAGGCTAGCATCTCACTTAGCCGCACCCTGCACCTGCTGCGTCCCCACT  
CCGTTGGTGTTGGGGACATTGCTCTCTGGGCTTTTGGTTTGGGGGCGCCCTCTCTGCTTCACTGTTCCCTCTGGC  
CTCCCATAGTGGGGCCTGGGAGGGTTCCCTGGCCTTAAAAGGGGGCCCAAGCCCCATCTCATCCTGGCAGGCCCT  
ACTCCACTGCCCTGGCAGCAGCAGGTGTGGCCAATGGAGGGGGTGCTGGCCCCAGGATTCCCCCAGCCAACT  
GTCTTTGTACACAGTGGGGCTCACACTTTTATCCTTCCCCACCTTCCCTAGTCCCTGCACTAGGTTGGACAGC  
CCCCCTCGGCTACAGGAAGGCAGGAGGGGTGAGTCCCTACTCCCTCTTCACTGTGGCCGAGCCCCCTTGCCCT  
CCGCCTGGGATCGAGTACATATTGTGGTGATGGAGATGCAGTCACTTATTGTCCAGGTGAGGCCCACGAGCCCTG  
TGTCCGCCGCTGAGGTGGGCTGGGGCTGCTCCCCTAACCTACTTTGCTTCCGCCACTCAGCCATTTCCCCCTC  
CTCAGATGGGGCACCATAAGCAAGGAGCTCACCTGCCCCGTCCCAACCCGCTCCTGCTCTTCCCTGCCCTCA  
AGGTTCTGGTTCCATTTTCTCTGTCCACAACTACCTCTGAACAGTTGTGTTGTTTTTGTTCATGTTCCAT  
TCTTCCACATCCGTATTGCTGCTGCTACCAGCGCCAAATATTCATCCTCACTGCCTCCTGTTCTGCCACGATC  
CCCTCCCGCAAGATACTCTTTGTAGGGAAGAGGGGCTGGGGCATGGCAGGCTGGGTGACCGCTACCCAGTCCC  
AGGGAAGGTGGGGCCCTGCCCCTAGGATGCTGCAGCAGAGTGAGCAAGGGGTCCCGAATCAACCATAAAGGGCGT  
AGGGGCCACCTCCTCCCCCTGTTCTGTTGGGGAGGGTGACCATGATTGTCCCAGCCTGGGGCTCCCCCTCTGG  
TTTCCTATTGTCAGTTACTTGAATAAAAAAATCCTTTTCTGG

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**FIGURE 3801**

MSESSSKSSQPLASKQEKDGTETKRGRGRPRKQPPVSPGTALVGSQKEPSEVPTPKRPRGRPKGSKNKGAATRKT  
TTTPGRKPRGRPKKLHRRRKRRASRRSPRRSSDPCVPPAPHWRSSFLLGLDSFAPLPPPPPLPQAHHHRLWP  
PPPSSTCALTTTLHSTPAAAGLPWAEWGAVFPWPQFPAPPAHPRIHTCPPGQG



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**FIGURE 3802**

GCGCTGGCGCGGTTCCAAGAAGCATCCCAGCCATCACTCTTTCACCTGCTCCTTAGAGAAGGGAAGATGAGCGAG  
TCGAGCTCGAAGTCCAGCCAGCCCTTGGCCTCCAAGCAGGAAAAGGAGGGCACTGAGAAGCGGGGCCGGGGCAGG  
CCGCGCAAGCAGCCTCCGATGAGTCCTGGGACAGCGTTGTAGGGAGTCAGAAGGAGCCCAGCGAAGTGCCAACA  
CCTAAGAGACCTCGGGGCCAACCAAGGGAAGCAAAAAAACTGGAGAAGTAGGAAGAGGAGGGCATCTCGCAAG  
AGTCCTCGGAGGAGGAGCAGTGAACCGTGCGTGCCGCCTGCTCCTCACTGGAGGAGCAGCTGCCTTCTGGGACTG  
GACAGCTTTGCTCCGCTCCCACCGCCCTCGCCCTTCCGCAGGGCCACCATCACCACCGCCTCTGGCCGCCACCC  
CCATCTTCCACCTGTGCCCACACCACCACTACGCAGCACACCAGCCACTGCAGGGCTCCCATGGGCTGAGTGG  
GGAGCAGTTTTCCCTGGCCTCAGTTCCCAGTCCCCCGCCACCCACGCATACACACATGCCCTCCTGGACAA  
GGCTAGCATCTCACTTAGCCGCACCTGCACCTGCT

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**FIGURE 3803**

MSESSSKSSQPLASKQEKEGTEKRGRGRPRKQPPMSPGTALVGSQKEPSEVTPKRPRGQPKGSKKNWRSRKRRRA  
SRKSPRRRSSEPCVPPAPHWRSSCLLGLDSFAPLPPPSPLPQAHHHHRLWPPPPSSTCAHTTTLRSTPATAGLPW  
AEWGAVFPWPQFPAPPAHPRIHTCPPGQG

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**FIGURE 3804**

GCATCCCAGCCATCACTCTTTACCTGCTCCTTAGAGAAGGGAAGATGAGCGAGTCGAGCTCGAAGTCCAGCCAG  
CCCTTGGCCTCCAAGCAGGAAAAGGAGGGCACTGAGAAGCGGGGCCGGGGCAGGCCGCGCAAGCAGCCTCCGATG  
AGTCCTGGGACAGCGCTTGTTAGGGAGTCAGAAGGAGCCCAGCGAAGTGCCAACACCTAAGAGACCTCGGGGCCAA  
CCAAAGGGAAGCAAAAACAAGGGTGCCGCCAAGACCCGGAACCACCATAACTCCAGGAAGGAAACCAAGGGGC  
AGACCCAAAAAACTGGAGAAGTAGGAAGAGGAGGGCATCTCGCAAGAGTCCTCGGAGGAGGAGCAGTGAATTCTG  
GGACTGGACAGCTTTGCTCCGCTCC

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**FIGURE 3805**

GATCCCTGAGCGTGTGGCAGCAGTGC GGTCGTGGTCCCTCCCTATGCAGCCTGGTTTCTAGCGTGACACGCCCTT  
GACTTGAGGACCATGAACCGCAGCCGCCAGGTGACGTGCGTGGCCTGGGTCCGCTGCGGCGTGGCCAAAGAGACA  
CCAGACAAGGTAGAGCTGAGTAAAGAAGAAGTAAAACGCCTCATTGCTGAGGCAAAGGAGAAATTGCAAGAAGAA  
GGTGGTGGCAGTGATGAAGAGGAGACAGGCAGTCCTTCAGAAGATGGCATGCAGAGTGCACGCACCCAGGCACGC  
CCAAGAGAGCCCCCTGGAGGATGGTGACCCAGAGGATGACAGGACGCTTGATGATGATGAGCTGGCTGAGTACGAC  
TTAGATAAATATGATGAGGAAGGTGACCCAGATGCTGAGACTCTTGGTGAATCTCTCTTGGGTCTTACGGTCTAC  
GGGAGTAATGATCAAGATCCTTACGTTACTCTGAAAGATACAGAACAATATGAACGTGAAGATTTCTTGATTAAG  
CCCAGTGATAATCTTATAGTTTGTGGCCGAGCTGAACAGGACCAGTGCAATTTAGAGGTGCATGTTTATAATCAA  
GAAGAAGACTCTTTTTATGTACACCATGATATACTCTTGTCTGCATATCCTCTGAGTGTGGAATGGCTGAATTTT  
GATCCTAGCCAGATGATTCTACTGGAAATTACATTGCTGTAGGAAACATGACCCCTGTATTGAAGTGTGGGAC  
CTTGATATAGTGGACTCTTTAGAGCCAGTCTTCACACTCGGAAGTAACTTTCAAAAAGAAGAAAAAGAAAGGA  
AAGAAGAGTTCCCTCAGCAGAAGGGCATAACCGATGCTGTCTTGACCTTTCATGGAATAAGCTAATCAGAAATGTT  
TTAGCAAGTGCAATCAGCTGACAACACTGTAATTCGTGGGATATGTCTTGGGGAACCAGCAGCTAGCCTCGCT  
GTACACACAGACAAGGTCCAAACACTGCAGTTTCATCCATTTGAAGCACAGACTCTGATTTCTGGCTCATATGAT  
AAGTCAGTGGCTTTGTATGACTGCCGAAGTCCAGATGAAAGCCATCGAATGTGGCGATTGAGTGGGCAGATAGAG  
AGAGTGAATGGAATCACTTTTACCTTGTCAATTTCTGGCCAGTACAGATGACGGCTTGTATATAATTTGGAT  
GCACGTTTCAAGATAAGCCAATTTTACACTTAATGCACACAATGATGAAATCTCTGGTCTTGATCTTAGCAGTCAA  
ATCAAGGGCTGTCTCGTGACTGCTTCAGCTGACAAATACGTGAAGATCTGGGACATCTTAGGAGATAGGCCAAGT  
CTAGTTCATTCTAGGGACATGAAAATGGGAGTTCTCTTCTGTTCTTCATGTTGCCCTGATTGGCATTATTAT  
GCCTTTGGAGGTCAAAAAGAAGGGCTTCGGGTCTGGGATATAAGCACAGTCTCTTCAGTAAATGAAGCATTGGA  
AGACGAGAGAGGCTTGTCTTGGGAGTGCAAGAAATTCATCTATTAGTGGCCCTTTTGGCAGCAGGAGCTCAGAT  
ACACCCATGGAGTCTTAATGAAGATCATCTAATTTCTGCTTACCTTAACTGGGAATTTTAAAAAGTTGGCCTAA  
AAATGTTCCATGCGTGGCAGCAACCATGCAGAGTGACTGAAACACAATTCATTCTGACTGACATTCCTTTCTGC  
AACTGCGGTGGCACCAAAATATCCGGTCTTTGTGCTTGCTCTTCAGATGGATGGTTTGTAAAGGCTCTTGTGCA  
TTTCTTAAAAAGAGTAATAAAAAGGATTTTAAAAAGTAATTCCTTAAACAT

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**FIGURE 3806**

MNRSRQVTCVAWVRGCVAKETPDKVELSKEEVKRLIAEAEKEKLQEEGGGSDEEETGSPSEDGMSARTQARPREP  
LEDGDPEDDRTLDDDELAEYDLDKYDEEGDPDAETLGESLLGLTVYGSNDQDPYVTLKDTEQYEREDFLIKPSDN  
LIVCGRAEQDQCNEVHVYNQEEDSFYVHHDILLSAYPLSVEWLNFDPSPDSTGNYIAVGNMTPVIEVWDLDIV  
DSLEPVFTLGSKLSKKKKKKKKSSAEGHTDAVLDLSWNKLIRNVLASASADNTVILWMSLGKPAASLAVHTD  
KVQTLQFHFFEAQTLISGSYDKSVALYDCRSPDESHRMWRFSGQIERVTWNHFSFCHFLASTDDGFVYNLDARSD  
KPIFTLNAHNDEISGLDLSSQIKGCLVTASADKYVKIWDILGDRPSLVHSRDMKMGVLFCSGCCPDLPFIYAFGG  
QKEGLRVWDISTVSSVNEAFGRRRERLVLGSAARNSSISGPFGRSSDTPMES

**FIGURE 3807**

GGGGGAGGCCCTGCAAGTTTCCCGGGCCGCGCGCCGCGCTCGCTCGCCTCCAGCCCGCGGCCCGAGCCGCCGCC  
GCGCCCGCCATGCCCCCTGGCCAAACAAAGGGGCTCCAAGGGCGGCCACGGCGCCGCGAGCCCCCTCGGAGAAGGGT  
GCCCACCCGTCGGGCGGCGCGGATGACGTGGCGAAGAAGCCGCCGCCGCGCGCAGCAGCCGCCGCCGCCGCC  
GCGCCGACCCGAGCAGCACC CGCAGCAGCACC CGCAGAACCAGGCGCACGGCAAGGGCGGCCACC CGCGCGGC  
GGCGGCGGCGGCGGCAAGTCTCTCTCTCTCTCTCCGCTCCGCGCCGCTGCCGCGCCGCCGCCCTCGTCTCTCG  
GCGTCTGCTCGCGCAGGCTCGGCAGGGCGCTCAACTTTCTCTTCTACCTCGCCCTGGTGGCGGCGGCCGCTTTC  
TCGGGCTGGTGCCTCACCACGTCTTGAGGAGGTCCAGCAGGTCCGCGCAGCCACCAGGACTTCTCCCGGCAG  
AGGGAGGAGCTGGGCCAGGGCTTGCAGGGCGTCGAGCAGAAGGTGCAGTCTTTGCAAGCCACATTTGGAACCTTT  
GAGTCCATCTTGAGAAGCTCCCAACATAAAACAAGACCTCACAGAGAAAGCTGTGAAGCAAGGGGAGAGTGAGGT  
AGCCGGATCAGCGAAGTGCTGCAGAACTCCAGAATGAGATTCTCAAAGACCTCTCGGATGGGATCCATGTGGTG  
AAGGACGCCCCGGGAGCGGGACTTCACGTCCCTGGAGAACACGGTGGAGGACGGGCTGACGGAGCTCACCAAATCC  
ATCAACGACAACATCGCCATCTTCACAGAAGTCCAGAAGAGGAGCCAGAAGGAGATCAATGACATGAAGGCAAG  
GTTGCCCTCCCTGGAAGAATCTGAGGGGAACAAGCAGGATTGAAAGCCTTAAAGGAAGCTGTGAAGGAGATACAG  
ACCTCAGCCAAGTCCAGAGAGTGGGACATGGAGGCCCTGAGAAGTACCCTTCAGACTATGGAGTCTGACATCTAC  
ACCGAGGTTTCGCGAGCTGGTGAGCCTCAAGCAGGAGCAGCAGGCTTTCAAGGAGGCGGCCGACACGGAGCGGCTC  
GCCCTGCAGGCCCTCACGGAGAAGCTTCTCAGGTCTGAGGAGTCCGTCTCCCGCCTCCCGGAGGAGATCCGGAGA  
CTGGAGGAAGAGCTCCGCCAGCTGAAGTCCGATTCCACGGGCCGAAGGAGGACGGAGGCTTCAGACACTCGGAA  
GCCCTTGAGGCACCTCCAGCAAAAGAGTCAGGGACTGGACTCCAGGCTCCAGCACGTGGAGGATGGGGTGCTCTCC  
ATGCAGGTGGCTTCTGCGCGCCAGACCAGAGCCTGGAGTCCCTCCTGTCCAAGAGCCAGGAGCACGAGCAGCGC  
CTGGCCGCCCTGCAGGGGCGCCTGGAAGGCCTCGGGTCTCAGAGGCAGACCAGGATGGCCTGGCCAGCACGGTG  
AGGAGCCTGGGCGAGACCCAGCTGGTGCTCTACGGTGACGTGGAGGAGCTGAAGAGGAGTGTTGGGCGAGCTCCCC  
AGCACCGTGGAATCACTCCAGAAGGTGCAGGAGCAGGTGCACACGCTGCTCAGTCAGGACCAAGCCCAGGCCGCC  
CGTCTGCCTCCTCAGGACTTCTGGACAGACTTTCTTCTCTAGACAACCTGAAAGCCTCAGTCAGCCAAGTGGAG  
GCGGACTTGAAAATGCTCAGGACTGCTGTGGACAGTTTGGTTGCATACTCGGTCAAAATAGAAACCAACGAGAAC  
AATCTGGAATCAGCCAAGGGTTTACTAGATGACCTGAGGAATGATCTGGATAGGTGTGTTGTGAAAGTGGAGAAG  
ATTACGAAAAGGTCATAATGAATTGCGTGTGCAGGGCGCGGATTTAAAGTCCAATTTCTCATGACCAAAAAATG  
TGTGGTTTTTTCCATGTGTCCCCTACCCCCCAATTTCTTGTCCCCTCTTAAAGAGCAGTTGTCAACACCTGAA  
ACCAAGGCATTGTATTTTCATGCCCAGTTAACTTATTTACAATATTTAAGTTCTCTGCTTCTGCATTGTGTTGGT  
TTCTGAAGCGCAGCCCCTGTGAATAACAGGTGGCTTTTCATGGATGTCTCTAGTCAGAGAAAAATGATAAAGGC  
TTAAATTGAGGATTAACAGAAGCAGATTAACTCAGAAATCCTGTCTGGCTGGCAGATTTCAAGTAAAAAATAA  
AAAAGGTGGGTGGGGGGACCCTTTTCTTTCTAGTTGTCTTTAAGGAAATTAATTTACTTTTTTTTTTGTCT  
GGCCGAAATTTTTATGAGATATCTCTCACTGTCTTCCACTTGAAGAACGTTAAAGCTCATAGCTGTCAGCTCTG  
AATGAGGAGGGGAGAAGCCCCCTGGGTCTTTTGAAGGAATCCGCTGCTTGAAGGCTGCCTCCCTCATGGTGT  
CGGTGTCGTTCTCTTCTGACGCATCTGTGATATCAGAGGTAAGTATGCAAAGCATCCAGGCGGTTCTGAATGTG  
AAGCATCTACCCAGCAGAGTCCCGGTGCCCTCTGTCCCCACTGCCGCCCCATGTCTCTCTCCGGAGGTCACCA  
AGGAATGCACAGGTTTCGACTACCAGAAAGGGGAGTCCCTGGGTTCTTTCAAAAAATTCGTGAGGAGAGCTGTCT  
ACAGTGAATAGGGGGTCTCCCTGGGGAATGCAGGCCAAGTCCTTTTATTTTAAACATGATGTCCATGAAGAGGTT  
TGCCGTCTGGGCAGCCCTGTGCGCAAGGAGCGTGCATACTGCGTTTGTGTAATTGTTTGTGTATCTCCCTTCCC  
TCGAGCTGTATTGTTCTTTAATGGCTGTCTTGCCCTTCCAAAAAAATGAAAAAAAAAAAA

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**FIGURE 3808**

MPSAKQRGSKGGHGAASPSEKGAHPSGGADDVAKKPPAPQPPPPPPAPHPQQHPQQHPQONQAHGKGGHRGGGGG  
GGKSSSSSSASAAAAAAAASSSASCRRRLGRALNFLFYALVAAAASFSGWCVVHVVLEEVQQVRRSHQDFSRQREE  
LGQGLQGVEQKVQSLQATFGTFESILRSSQHKQDLTEKAVKQGESEVSRISEVLQKLQNEILKDLSDGIHVVKDA  
RERDFTSLENTVEERLTELTKSINDNIAIFTEVQKRSQKEINDMKAKVASLEESEGNKQDLKALKEAVKEIQTSA  
KSREWDMEALRSTLQTMESDIYTEVRELVSQKQEQAFKEAADTERLALQALTEKLLRSEESVSRPPEEIRRLEE  
ELRQLKSDSHGPKEDGGFRHSEAFEALQQKSQGLDSRLQHVEDGVLSMQVASARQTESLESLSKSQEHEQRLAA  
LQGRLEGLGSSEADQDGLASTVRSLETQLVLYGDVEELKRSVGELPSTVESLQKVQEQVHTLLSQDQAQAARLP  
PQDFLDRLSSLDNLKASVSQVEADLKMLRTAVDSLVAYSVKIETNENNLESAGLLDDLRNDLDRLFVKVEKIH  
KV

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**FIGURE 3809**

ATGGAGGAAGTGGAAC TTGATTTGGGTTTGAAGAATACCGTGGAGGAAGTGGAAC TTTATTTGGCTTTGAAGAAT  
AGAAACTATGGAGGAGTATATGTTGGCCTACCATCTGAAGCTGTCAATATGGTGTCCAGTCAAACAAAGACGGTT  
CGGAAAAC TTGCTCATCAGTTTGGGAAGGAATTTGGCTCCGTGGGACGTTGTAATGTGCACAGACATTTCCAAGGA  
AATTCTAAACAGTCACCC TTTCCCTTTTGCATTCCCCCAAATCTTAAGTGTATACATAAAACCCTGGGTACATATT  
GTTGTGGTAATAGAAGGGAATTGGTTAAACAGTACACTTGTTTATGGAAC TTTCTGTGGCCACCTACGAAAGACA  
AGTTAA



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**FIGURE 3810**

GGCACGAGGCTCTGTACCTGGGCTGGAGTCCAGTGGCGTGATCATAGCTCACTGTAGCCTCCAACCCCTGGGCT  
CAAGTGATCCTCCCCACTCAGCCTACCCAAGCAGCTGGAACACAGGAGTGGTATGAGGAGCATGCCAGGGAGCA  
AGAGCAGCAGCGACAACCTCAGCAGCAGTGCAGCCCCCGCCGCCAGCAGCCCCCAGGCAGCCGCCAGCGCTCCCA  
GACCGTTACCTAGCCCAGCGCCCGAAAGCCGTCTCTTCTATGCAATAACACAATAGTATTACTCTACTGCGATGT  
ACGGAACCTGCGGTGTGTGTACACATACTCAGTATATGCACATATTTATATACAGGAAGAAAAAGACAGACAAG  
ATGGGGCTTGGTTTATAAACCACCTTGCCCTGTCTTCTTAACCTCCAGAAGCCAGTTTGGTGAGGGGTGGGGGTGC  
GGCCACCAGGTCTGAGCTCTTCTACTGTGGAAGGCTCCAGAAGGCCCTTCACAAGGAGACCCCTCACCTGGATC  
CAGTCGACTGCGGGGCTTGCCCTCATGTGGGCTGGCCTCCATCGGCCACGTCCAAAGCTGTCACTGCTACTGCT  
TCAGGCTCACATCCCCCGACCTGATGGCGTGCCGCCCCCTCTCCCTGCGGGCCATGCCACAGGTTTCTGTGTT  
TTGCTTTAGGGACAGAACCCTTAGGAAGGAAAGAACTCCCGGTCTCCAGGGTGGTATTTTCAGTGTCTGTGATAA  
TGTCACGCAACACCTCTTCGGGGACCACTGCCCAGGATCTAATGGAAGCGGAATTGGGGCAACTGGGCCCATGTG  
GCCAGAGCTCAGTTAGCCAGTGCCGGGCGGCCACAGATTACACTGACCAATCTCCTCCCTTGGCTCTGCAAGCCT  
CCCCCAGCCTTCTCTGGCTTAACCTTGTTGGCGAAAACCTTCCACAGTGGCCTCCTTGGGGACCCAGAAC  
CGGAGGAAGGGGCATGAGGCAGGAAGTGGGGCCGATGTCTGCAACCCAGACCACTTCGTGGAATGGGCTCTTGAC  
CAAATCCCTTTTTTTGCGATTTACCCGTTCAAGCAAAACAACGTTTTGGTTAACTAAGGATTGTGCTAAAGCCGA  
TACCAGGTCCCTTACACGTGTGCACTAGGAACAGGAGCGAACAGCACAGAGAGACGCTCCCTGTGGGACGCAGCA  
GCCCCGTGGCCCCGCGCCAGTTCCCAGCCACCCTCCCTGGCTCTGCTCACACCAGAGATTTCCATAGCAGGAGCG  
GTTGGTGCAGAAGTAGGTTCAAGTGAACCTCAGTTAACGTCGCCACCCCTCCTCCCACCATGGTACCCTGTAGGA  
GCCCTGTATGACATCTGAGCGTGGTGGAGGTAGGAGGGTTGCCAGCTGCAGTGACCCCTGCCACAGAGGCAGGGTC  
AGTGCAGAGGTGCGTTTTGGTTCCGCTTCCCTGGGCCACAGAACGGAACACAGCATAGGTTCTGCAGCAGGAGCCG  
CAGTGGCAGGATGGAGGGTGCAGAGGGCAAGGAGTGCAGTCTGGGCATTCTTGGCCAGCCCCGGCCCTCTGGTG  
CCTGCTTCTGTGACTTCAGAAGGCAGGTGGACAGAGCCTCCCTCTGGCCTTGTCTCTTCCCAGCCACAGAAGC  
GGCAGGGTGGCACCCGACCCAGGGGAGCAGTACCTGGTCCCCCACCCTCCTCCCAACCACCTCCAAGGCCAA  
GCTGGGTCCCATAGCCAGCACGGCATGGTTCTCCCTTCCCCCTTCCCAGGTCAGGGGAGTTGGACAAGTAGCA  
GGTGTGTTGTTTTAAAGCACAGCCCTTTGGGAAAGCAACACATTATTGAGACTCACTGTGATTCCCCGGGAGTC  
AGACTGGCTTTGTCTCTTCTCTCTGAGGGGCCATGGGCCATCAGCAGGAGCTCCACATCGAGCCCCAGGCCAG  
AACCCCTCCCTTTTACAGAGAGGGAACCTTTATTGCACAATTGGGTGCCTTTTAGCTTTTGTGTGTTGAAATGGG  
CGTTTTGGAAGCAAGGGTCAGGGGACAGCTTCTAAAGGTGTGAGTCTCTGACCTGAGCATCTGGGCCTCGCCTGG  
GCCCTTCTTCTTCCCAGGGGTGGAACGTGGAGGGGCCAGCAGCACCCCGGGGTCTGCCCAGGGGAGTCAAGGC  
CCCAGGTGGGGGGGCCTATTCCAGGAGGAGTGGATCTCGGCCCTGTCCAGAGCGAGTTAATGTGTCCATCTGC  
CCAACCTGTCTGAGAAAGGACCTGGTTTTGGCCAGGACCTGACAAATACCAATGGCAGCAGTGTCAACAGAC  
GGGAGTCCAGCCAGGGTGGGTGCCCTTGTCAATTGAGGTAGGGACAGCTATCCCAGGTTATGCCTGGCCCCACC  
CAGCAGGGAGTTGGGGTCCCCCACAGGCTGTGAGCTCTGTGGGCCCTGGGATGTGATCTAGCTCAGATGCCCTC  
TCATCCTTGATGTATAGTTGAGTGCACCAAGTGGCACCCACTGGCGGCCAGGGGCACAGCCTGGTGGTGGTGG  
CAATAGAAGTGTGCCCCCTCCTCAGCTCCTCGCTTCCCTCCCACAGCCCCAGCCTTACTCCACCATGCGGACAAT  
CATTTTGTACGGATCACGGGAGCAATGCTGTACGGTTTTGTACACTGGTGGTTTTGTTTCTAGAAAACCCATTGT  
GTCTCTGGATTTCTAGCACATTACTAAAAGAGCCTCTGCTTTGTAAAAA

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**FIGURE 3811**

MTSERGGGRRVASCSDPATEAGSVQRS LWFRFPGPQNGTQHRFCSRSRSGRMEGAKGKECTAGHSWPAPALWCLL  
PVTSEGRWTEPPSGLVLF PATERAGWHPTPGEQYLVPHPLLPTTSKAKLGPIASTAWFSPSPLPRSGELDK

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**FIGURE 3812**

GATGCGGCTGTGATTGCTGAATTGTCTGGGCAGGTTTGGAGTCTCTGGCAAGCTCCCCTGACTGTGCATCCCTCT  
GGAGACGAAGAGGAGGGGAGGCCTGTCTCTCTGGGATCCATTGGTCACATCCCCCTGAGGATTCCCGAATGCC  
TACCTCCAGTGTCTGTCACATGGAGTTCTGAAGTCCATGTGGCTCTTCACAGTGAATCAGGTGTTAAGGAAGATG  
CAGAGACGCCACAGCAGCAACACGGATAACATTCCACCTGAAAGCTGTGACCAAGGCTGGCCCCCTCTGGGGAAC  
GGGGGCCATTGAACCTGAAGACTGCAGAGCCAGCGGTCTTGGGATCCCGAGAAACCGCAGCCAGGCGCTCAGCT  
CCGAGGCGAGTGTGGATGAAGGTGGCGTCTTTGAGAGTCTGAAGGCAGAGGCAGCCTCCCCACAGCGCTCTTCT  
CGGGCTTATCAGGCAGCCTCCCCACCAGCTCGTTCCCCTCCAGCCTGGTGCTGGGCTCCTCGGCTGGCGGGGGG  
ACGTGTTTATCCAGATGCCCGCTCCAGGGAGGAAGGAGGGGGCGGGGGCGAGGGGGCGCCTACCACCACCGCC  
AGCCCCACCACCATTTCCACCATGGCGGCCACCGCGGGGCTCCCTGCTGCAGCACGTGGGTGGGGACCACCGGG  
GGCACTCGGAGGAGGGAGGCGACGAGCAGCCTGGGACGCCCGCCCCCGCCCTGTCCGAGCTGAAGGCTGTGATCT  
GCTGGCTCCAGAAAGGACTCCCCCTTCATCCTGATCCTCTGGCCAACTGTGCTTTCAGCATAAGCTCGGCATTG  
CTGTGTGCATCGGGATGGCCAGCACCTTCGCCTATGCCAACTCCACGCTTCGAGAACAGGTCTCACTGAAGGAGA  
AGAGGTCAGTGTGGTTCATCTTGTGGATCCTGGCCTTTCTGGCGGGGAACACCCTCTATGTGCTTTATACATTCA  
GCTCCCAGCAGCTGTACAACAGCCTCATATTCTGAAGCCCAACCTGGAGATGCTGGACTTCTTTGACCTGCTAT  
GGATTGTGGGGATCGCAGACTTTGTTCTGAAGTACATCACCATCGCCCTCAAGTGCCTCATCGTGGCCCTGCCCA  
AGATCATCCTGCCGTCAAGTCCAAGGGAAAGTTCTATCTGGTTCATCGAGGAGCTGAGCCAGCTGTTCCGATCCC  
TTGTCCCCATCCAGCTGTGGTACAAATACATCATGGGTGACGACTCCTCCAACAGCTACTTCTGGGCGGGGTCC  
TGATCGTTCTCTACAGCCTCTGCAAGTCCTTCGACATCTGTGGACGTGTGGGCGGAGTTAGGAAAGCCCTGAAGC  
TTCTCTGTACCTCTCAGAACTATGGAGTCCGAGCCACCGGGCAGCAGTGCACAGAAGCTGGTGACATCTGCGCCA  
TCTGTGAGGCGGAGTTCCGAGAGCCTCTGATTCTCCTGTGCCAGATGCTGTTGAAGGGGCACAAGAAATTGGAGC  
TGGAGAAGATTGATGAAAGTGCAGGTGTCTAAGGAAATAGAACAGTCTGCTGGGAGTCAGACCTGGAATTCTGAT  
TCCAAACTCTTTATTACTTTGGGAAGTCACTCAGCCTCCCCGTAGCCATCTCCAGGGTGACGGAACCCAGTGTAT  
TACCTGCTGGAACCAAGGAAACTAACAATGTAGGTTACTAGTGAATACCCCAATGGTTTCTCCAATTATGCCCAT  
GCCACCAAAACAATAAAACAAAATTCTCTAACACTGAT

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**FIGURE 3813**

MPASREEGGGRGEGGAYHHRQPHHHFHHGGHRGGSLLQHVGGDHRGHSEEGGDEQP GTPAPALSELKAVICWLQK  
GLPFILILLAKLCFQHKLGIACIGMASTFAYANSTLREQVSLKEKRSVLVILWILAFLAGNTLYVLYTFSSQQL  
YNSLIFLKP NLEMLDFFDLLWIVGIADFLKYITIALKCLIVALPKIILAVKSKGKFYLVIEELSOLFRLVPIQ  
LWYKYIMGDDSSNSYFLGGVLIVLYSLCKSFDICGRVGGVRKALKLLCTSQNYGVRATGQQCTEAGDICAICQAE  
FREPLILLCQMLLKGHKKLELEKIDESAGV

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**FIGURE 3814**

GAACTGCCATCTTCTAGTAATTCGCCAAAATGACGAACACAAAGGGAAAGAGGAGAGGCACCCGATATATGTTCT  
CTAGGCCTTTTAGAAAACATGGAGTTGTTCCCTTTGGCCATGTATATGTGAATCTATAAGAAAGGTGATATCGTAG  
ACATCAAGGGAATGGGTACTGTTCAAAAAGGAATGCCCCGTAAGTGTTACCATGGCAAACTGGAAGAGTCTACA  
ATGTTACCCAGCATGCTGTTGGCATTGTTGTAAACAAACAAGTTAAGGGCAAGATTCTTGCCGAGAGAATTAATG  
TGCATATTGAGCACATTAAGCACTCTGAGAGCCGAGATAGCTTCCTGAAATGCATGAAGGAAAATGATCAGAAAA  
AGAAAGAAGCGGAAGAGAAAGGTACCTGGGTTCAACTCAAGCGCCAGCCTGCTCCACCCAGAGAAGCACACTTTG  
TGAGAGCCAATGGGAAGGAGCCTGAGCTGCTGGAACCTATTCCCTGTGAATTCATGGCATAAATAGGTGTTAAAAA  
AAAAAAAAAAAAAGACCTCTGGGCTAT

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**FIGURE 3815**

MRTQRERGEAPDICS LGLENMELFLWPCICEIYKKGDIVDIKMGTVQKGMPRKYHGKTGRVYNVTQHAVGIV  
V NKQVKGKILAERINVHIEHIKHSERDSFLKCMKENDQKKKEAEEKGTWVQLKRQPAPPREAHFVRANGKEPEL  
LEPIPCFMA

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**FIGURE 3816**

GGGGGGTCTGCGTCTTCCCGAGCCAGTGTGCTGAGCTCTCCGCGTCGCCTCTGTGCCCCGCGCCTGGCCTACCGC  
GGCACTCCCGGCTGCACGCTCTGCTTGGCCTCGCCATGCCGGTGGACCTCAGCAAGTGGTCCGGGGCCCTTGAGCC  
TGCAAGAAGTGGACGAGCAGCCGAGCAGCCCGCTGCATGTCACCTACGCCGGGGCGGCGGTGGACGAGCTGGGCA  
AAGTGCTGACGCCCCACCCAGGTTAAGAAATAGACCCACCAGCATTTTCGTGGGATGGTCTTGATTACAGGGAAGCTCT  
ACACCTTGGTCCTGACAGACCCGGATGCTCCAGCAGGAAGGATCCCAAATACAGAGAATGGCATCATTTCTCGG  
TGGTCAACATGAAGGGCAATGACATCAGCAGTGGCACAGTCTCTCCGATTATGTGGGCTCGGGGCCTCCCAAGG  
GCACAGGCCTCCACCGCTATGTCTGGCTGGTTTACGAGCAGGACAGGCCGCTAAAGTGTGACGAGCCCATCTCA  
GCAACCGATCTGGAGACCACCGTGGCAAATCAAGGTGGCGTCTTCCGTAAAAAGTATGAGCTCAGGGCCCCGG  
TGGCTGGCACGTGTTACCAGCCGAGTGGGATGACTATGTGCCCAAAGTGTACGAGCAGCTGTCTGGGAAGTAGG  
GGGTTAGCTTGGGGACCTGAACTGTCTGGAGGCCCAAGCCATGTTCCCCAGTTCAGTGTTCATGTATAATAG  
ATTTCTCCTCTTCTGCCCCCTTGGCATGGGTGAGACCTGACCAGTCAGATGGTAGTTGAGGGTGACTTTTCTCT  
GCTGCCCTGGCCTTTATAATTTTACTCACTCACTCTGATTTATGTTTTGATCAAATTTGAACTTCATTTGGGGGG  
TATTTTGGTACTGTGATGGGGTCATCAAATTATTAATCTGAAAATAGCAACCCAGAATGTAAAAAAGAAAAA  
GGGGGGAAAAAGACCAGGTCTACAGTGATAGAGCAAAGCATCAAAGAATCTTTAAGGGAGGTTTAAAAA  
AAAAAAGATTGGTTGCCTCTGCCTTTGTGATCCTGAGTCCAGAATGGTACACAATGTGATTTTATGGTGAT  
GTCACCTACCTAGACAACCAGAGGCTGGCATTGAGGCTAACCTCCAACACAGTGCATCTCAGATGCCTCAGTAGG  
CATCAGTATGTCACCTCTGGTCCCTTTAAAGAGCAATCCTGGAAGAAGCAGGAGGGAGGGTGGCTTTGCTGTTGTT  
GGGACATGGCAATCTAGACCGGTAGCAGCGCCTCGCTGACAGCTTGGGAGGAAACCTGAGATCTGTGTTTTTAA  
ATTGATCGTTCTTCATGGGGGTAAGAAAAGCTGGTCTGGAGTTGCTGAATGTTGCATTAAATTGTGCTGTTGCTT  
GTAGTTGAATAAAAACCCG

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**FIGURE 3817**

MEVDLSKWSGPLSLQEVD EQPQHPLHVTYAGAAVDELGKVLTP TQVKNRPTSISWDGLDSGKLYTLVL TDPDAPS  
RKDPKYREWHHFLV VNMKGNDISSGT VLSDYVGSGPPKGTGLHRYVWL VYEQDRPLKCDEPI LSNRSGDHRGKFK  
VASFRKKYELRAPVAGTCYQAEWDDYV PKLYEQLSGK



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**FIGURE 3818**

GCTCTCCGCGTCGCCTCTGTGCGCCGCGCCTGGCCTACCGCGGCACTCCCGGCTGCACGCTCTGCTTGGCCTCGC  
CATGCCGGTGGACCTCAGCAAGTGGTCCGGGCCCTTGAGCCTGCAAGAAGTGGACGAGCAGCCGAGCAGCCCGCT  
GCATGTACCTACGCCGGGGCGGCGGTGGACGAGCTGGGCAAAGTGCTGACGCCCTGTGCCGGCCTCCTGGGTGG  
GACCCAGCGGAGACAGGGCCAGGGGCGGTGGGGAGGTTACGCCTGCGTGTGTCGAGGCCCCCAGGCCAGAGGT  
CCCGGGGTCCATGTCCCATGCCTGGGGGCCACCCGAGCACCGGGAACCCGGCCTGTGGCGTGGCCAGGCAGGTT  
CGGCCTGCGGCAGAAATTCATTCACTTTTCCCGGGCTTCAGACCCAAGAGGGACCTAGGTTTCGGAAACAGGCCGG  
ATCCCCCTCTCCCCCACAGGCCAGGGCGCTGGAGAGGGACGTCGCCGGGACAGAGTAGGCTGTGGCTGCCCGGA  
CGCCCCAGAGCTTCCCCTAGGGCCTCAGCATTTTAGGCCTGGTTTTGGAGGGCTGAAGCCTCACCCGAGAGCCT  
GTGACGCATTATGTAAGTGGC

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**FIGURE 3819**

CGGGAGCGGGGACCCGAGCCTGCAGCCGAGCTCCGCTGCCGGCCCTGGACACTCGGCTCAGCCAAGCATCCTTCC  
TGGGGGCCGAGGAAGTGGGGCCACTCTGCCGTTCCGAGGACCTGGGAGGAGCCCTCGGTACCCCGGGCCCCGGGG  
CCCTGGGGCACACACGTCCAGCCCAGCCCAGCCTGCGTTTCTGAGCCGGGATCTGGGGCGAGATGCCCGCAGG  
CGGCAGTGGCCCCGAGCCCCGCGTCTCGTCTGCCTCGGGGCGCTCCTGGCCGGCTGGGTGCGCGTAGCCCAAGG  
TTGAACTCGCCTTACACCTGTAACCGGTGGACTTCCCTACACACCTTTGCAAGTCTTCTGTGCCGACCAGCGCC  
TTCAAAGCGGGTCTTCCGCCTTTACTTTTGGAAAAGCTTTTATTTTGAATACTTGGCTGACTTACAAAAGAC  
TTCCCTCAGACTTGACATGATTGACAAAAGGTCTGAAATGCTTCATCTATGGTCTGCTTTGCTACGAAAAAGA  
ATTGGAGGGGTGCTTACAAAATATGTAGAATGTAAAAAGATTGAACTATTTATATATATTTGAATTTAATTCAC  
CAGCATGCCTACTGTGCATGCCTACTGTGTGCTGGGAGTGTGACAAGCTGGGAGGAGGCTGGGGTGAGGGAGAG  
GAGATGGAGCCAGGAGGTGGTGAAGTTTGCCAGGATGCAGGCAGAGCGCTACTTTTGTGTTCCCGGTCTGCTC  
CACCCAACGGGTCTCCTCTTGCACGTTTCTGGAGATGGGTGTAAAGTATGCTGGAGCTTCTTAGCAGCAAGTGC  
CAAGAGTTCCTAATTATTAGGCTCATACAATTTTATTTTGCTTTTTTTTTTTTAAACCAACCATTAAAAACAATA  
ACATCTCTAGATTTCCAGTTTATCTGGAAAATCTGAAGGTCTGGCAACACGGGGCCTGCTTTCCAGTTGGAAT  
TGGGCAGTGGTCATCCTCTTATCTAGGGCATATGAGCCCAAATTTGTTCCACCTCTCCCTGTTGTAATATTGCG  
CCGCCACCTTCAGTCATGGGTGTTACCTGCTGCGCCCTGCAGGCATTTGGCTGAGTAATCACTGTGCTGGGGTGTG  
GGTGATGGGGGAGGACAGTTCCTAGTTGGTCATCTCTGGACGTGAAAGGTGGTTGTCAAGTATCCCATCTCCCC  
AGCTGTTTGCAGTGTTCCTGCACGATGAACACCAGGAACCTGGGAAGTGAGAAGAACCCTGGGATGAAGTCATC  
CTGCTGGAATGACCTGGCTTTCAGGCTGACTGCCACCCGCCCATGGGGAACCTATCTCCACTGCTATGGCCAGC  
TATTTTTTTTCGAGCCAGGCTCTCGCTCTGTTGCCCAGGCTGGAGTGCAGTGGTGCATCACTGCACTGATCCTCC  
CACCTCAGCCTACAAGTAGCTGGGACTACAGGCGTGACACCACGCTAGCTAATTTCTAAAATTTTTTGTAG  
AGACGGTCTCTACAATCGCTTGAGCCCAGGCTGGTCTTAACTCCTGGACCAAGCGATCCTCCTGTCTCGGCCT  
CCCAAAGTGTGGGATTATGGGTGTGAGCCACCGTGTGGGCCTTTGCCAGCTATTTTGATGCCAGACCTGCT  
TCACCTTTGTGTATGATGCCAGGGGGCTTCTGAGCTTGGTGTATTTTGTGTGTGTTGTTTTTAAAGTTGGG  
AGTTTTTGGGGAAAAAATTTTCTCCTGACATTCAATGCCAGACAACTTATATGCATCCACTAGCTACCCCGGA  
TTGTAAATCCTAGGTTATTCTTGGGAAAAGTTGCTTTAAAAAATAAATAAATGTTTGGGTAT

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**FIGURE 3820**

MAAGGSAPEPRVLVCLGALLAGWVAVAQG

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**FIGURE 3821**

AAAACAACAAATGGCGGATGACGCCGGTGCAGCGGGGGGACGGAGGCCCTGGTGGCCCTGGGATGGGGAACCG  
CGGTGGCTTCCGCGGAGGTTTCGGCAGTGGCATCCGGGGCCGGGGTCGCGGCCGTGGACGGGGCCGGGGCCGAGG  
CCGCGGAGCTCGCGGAGGCAAGGCCGAGGATAAGGAGTGGATGCCCGTCACCAAGTTGGGCCGCTTGGTCAAGGA  
CATGAAGATCAAGTCCCTGGAGGAGATCTATCTCTTCTCCCTGCCCATTAAGGAATCAGAGATCATTGATTTCTT  
CCTGGGGGCCCTCTCTCAAGGATGAGGTTTTGAAGATTATGCCAGTGCAGAAGCAGACCCGTGCCAGCCAGCGCAC  
CAGGTTCAAGGCGTTTGTGTCTATCGGGGACTACAATGGCCACGTCTGGTCTGGGTGTTAAGTGCTCCAAGGAGGT  
GGCCACCGCCATCCGTGGGGCCATCATCCTGGCCAAGCTCTCCATTGTCCCGTGCGCAGAGGCTACTGGGGGAA  
CAAGATCGGCAAGCCCCACACTGTCCCTTGCAAGGTGACAGGCCGCTGCGGCTCTGTGCTGGTGCGCCTCATCCC  
TGCACCCAGGGGCACTGGCATCGTCTCCGCACCTGTGCCTAAGAAGCTGCTCATGATGGCTGGTATCGATGACTG  
CTACACCTCAGCCCGGGGCTGCACTGCCACCCTGGGCAACTTCGCCAAGGCCACCTTTGATGCCATTTCTAAGAC  
CTACAGCTACCTGACCCCCGACCTCTGGAAGGAGACTGTATTTACCAAGTCTCCCTATCAGGAATTCAGTACCA  
CCTCGTTAAGACCCACACCAGAGTCTCCGTGCAGCGGACTCAGGATCCAGCTGTGGCTACAACATAGGGTTTTTA  
TACAAGAAAAATAAAGTGAATTAAGCGTG

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**FIGURE 3822**

MADDAGAGGGGGAGGPGGPGMGNRGAFRGGFGSGIRGRGRGRGRGQGCGARGGKAEDKEWMPVTKLGRLVKE  
MKIKSLEEIYLFSLPIKESEIIDVFLGASLKDEVLKIMLVQKQTRAGQRTRFKAFFAIGDYNHVG LGVKCSKEV  
ATAIRGAIILAKLSIVPVHRGYWGNKIGKPHTVPCKVTGRCGSVPARLIPAHGGTGIVSAPVPPKLLMMAGIDDC  
YTSARGCTATLGNFAKATFDAISKTYSYLTPNLWKETVFTKSPYQEF TDHLVKTHTRVSVQWTQAPAVATT

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**FIGURE 3823**

CGACTCGTCGCCATTCCCGGAGCAGGTCGGCCTCGGCCCAGGGGCGAGTATCCGTTGCTGTGTGCGGAGACACTAG  
TCCCCGACACCGAGACAGCCAGCCCTCTCCCTGCTCGCGGCGGGAGAGCGTGTCCGGCCGGCCGGCCGGCGGG  
GCTCGCGCAACCTCCCTCGCCTCCCTTCCCCCGCAGCCTCCGCCCCGCCAGCCCCGGCCCGGACTCCCGAGCCC  
CGGCCTCCTCGTCTCGGTGCGCGCTGCGCGCGGGCTTAACAGCCCCGTCCGCCGCTTCTCTTCTAGTTTGAGA  
AGCCAAGGAAGGAAACAGGGAAAAATGTCGCCATGAAGCCGAGAACCGCTGCCGCCGCCGACCCCCGCCGGCCC  
TGAACGCCATGAGCCTGGGTCCCCGCGCGCCCGCTCCGCTCCGACTGCCGTGCCGCCGAGGCCCGGTTGATG  
CCGCTGAGCTCCCCAACGCCGCCGCCACCGCCTCCGACATGGACAAGAACAGCGGCTCCAACAGCTCCTCCGCC  
TCTTCGGGCGAGCAGCAAAGGGCAACAGCGCCCCGCTCCGCTCGCGGGGGCCAGCCGGCGAGTCTAAACCCAAG  
AGCGAATTACTAATTTAGCTGGATTCAATTTGTTGTGTCAGTTGATTCTGTAGTAAGGCCATATGTTGCCCTCTG  
GAGGTGCTTGTCACTACTCTGGATGATGGAAAGAACTCCAGTGGATCCAAGCGTTATAATCGAAACGTG  
AACTTTCTACCCCAAAAATGAAAGTTTAAACAACAGTCCCGTCGCTCCAGTTCACAGAAAAGCAAGACTTTTA  
ACAAGATGCCTCCTCAAAGGGGCGGCGGCAGCAGCAAACCTTTAGCTCTTCTTTAATGGTGGAAAGACGAGATG  
AGGTAGCAGAGGCTCAACGGGCAGAGTTTAGCCCTGCCAGTTCTCTGGTCTAAGAAGATCAACCTGAACCACT  
TGTTGAATTTCACTTTTGAACCCCGTGCCAGACGGGTCACTTTGAAGGCAGTGGACATGGTAGCTGGGGAAAGA  
GGAACAAGTGGGGACATAAGCCTTTTAAACAAGGAACCTTTTACAGGCCAACTGCCAATTTGTGGTGTCTGAAG  
ACCAAGACTACACAGCTCATTGCTGATCCTGATACATTAGTTAACTGGGACTTTGTGGAACAAGTGCGCATTT  
GTAGCCATGAAGTGCCATCTTGCCCAATATGCCTCTATCCACCTACTGCAGCCAAGATAACCCGTTGTGGACACA  
TCTTCTGCTGGGCATGCATCCTGCACATCTTTCACTGAGTGAGAAGACGTGGAGTAAATGTCCCATCTGTTACA  
GTTCTGTGCATAAGAAGGATCTCAAGAGTGTGTTGCCACAGAGTCACATCAGTATGTTGTTGGTGATACCATTA  
CGATGCAGCTGATGAAGAGGGAGAAAGGGGTGTTGGTGGCTTTGCCCAAATCCAAATGGATGAATGTAGACCATC  
CCATTCACTAGGAGATGAACAGCACAGCCAGTACTCCAAGTTGCTGCTGGCCTCTAAGGAGCAGGTGCTGCACC  
GGGTAGTTCTGGAGGAGAAAGTAGCACTAGAGCAGCAGCTGCCAGAGGAGAAGCACACTCCCAGTCCCTGCTTTA  
TTGAGGCAGCTATCCAGGAGCTCAAGACTCGGGAAGAGGCTCTGTGCGGATTGGCCGAAGCAGAAGGGAGGTCA  
CTGGTGTGTTGGCTGCTCTGGAACAACCTGGTGCTGATGGCTCCCTTGCGGAAGGAGTCTGTTTTTCAACCCAGGA  
AGGGTGTGCTGGAGTATCTGTCTGCCTTCGATGAAGAAACCACGGAAGTTTGTCTCTGGACACTCCTTCTAGAC  
CTCTTGCTCTCCCTCTGGTAGAAGAGGAGGAAGCAGTGTCTGAACCAGAGCCTGAGGGGTGGCCAGAGGCCTGTG  
ATGACTTGAGTTAGCAGATGACAATCTTAAAGAGGGGACCATTGCACTGAGTCCAGCCAGCAGGAACCCATCA  
CCAAGTCAGGCTTACACGCCTCAGCAGCTCTCCTTGTTACTACTTTTACCAAGCGGAAGATGGACAGCATATGT  
TCCTGCACCCTGTGAATGTGCGCTGCCTCGTGCGGGAGTACGGCAGCCTGGAGAGGAGCCCCGAGAAGATCTCAG  
CACTGTGGTGGAGATTGCTGGCTACTCCATGTCTGAGGATGTTTCGACAGCGTCACAGATATCTCTCACTTGC  
CACTCACTGTGAGTTAGCATCTGTGAACTGGCTTTGCAACCTCCTGTGGTCTCTAAGGAAACCCTAGAGATGT  
TCTCAGATGACATTGAGAAGAGGAAACGTCAGCGCCAAAAGAAGGCTCGGGAGGAACGCCGCCGAGAGCGCAGGA  
TTGAGATAGAGGAGAACAAAGAAACAGGGCAAGTACCCAGAAGTCCACATTCCCCTCGAGAATCTACAGCAGTTTC  
CTGCCTTCAATTCTTATACCTGCTCCTCTGATTCTGCTTTGGGTCCCACCAGCACCGAGGGCCATGGGGCCCTCT  
CCATTTCTCCTCTCAGCAGAAGTCCAGGTTCCCATGCAGACTTTCTGCTGACCCCTCTGTACCCACTGCCAGTC  
AGGGCAGTCCCTCATTCTGCGTTGGGAGTCTGGAAGAAGACTCTCCCTTCCCTTCCCTTGCCAGATGCTGAGGG  
TTGGAAAAGCAAAAGCAGATGTGTGGCCAAAACCTGCTCCAAAGAAAGATGAGAACAGCTTAGTTCTCTGCCC  
CTGTGGACAGCGACGGGGAGAGTGATAATTCAGACCGTGTTCCTGTGCCAGTTTTCAAATTCCTTCAGCCAAG  
CTATTGAAGCAGCCTTCATGAACTGGACACACCAGCTACTTCAGATCCCCTCTCTGAAGAGAAAGGAGGAAAGA  
AAAGAAAAAACAGAAACAGAAGCTCCTGTTTCAGCACCTCAGTCGTCCACACCAAGTGACACTACTGGCCCAGGC  
TACCTTCTCCATCTGGTTTTGTTTTGTTTTTTTTTCCCCATGCTTTTGTGTTGGCTGCTGTAATTTTTAAGTA  
TTTGAGTTTGAACAGATTAGCTCTGGGGGAGGGGTTCCACAATGTGAGGGGAACCAAGAAAATTTAAATA  
CAGTGTATTTTCAGCTTCTGTCTTTACACCAAAATAAAGTATTGACACAAGAG

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**FIGURE 3824**

MMDGKNSSGSKRYNRKRELSYPKNESFNNQSRSSSQKSKTFNKMPPQRRGGSSKLFSSSFNGGRRDEVAEAQRA  
EFSPAQFSGPKKINLNHLLNFTFEPRGQTGHFEGSGHGSWGKRKNKGHKPFNKELFLQANCQFVVEDQDYTAHF  
ADPDTLVNWDVFVEQVRICSHVPSCPICLYPPTAAKITRCGHIFCWACILHYLSLSEKTWSKPCICYSSVHKKDL  
KSVVATESHQYVVGDTITMQLMKREKGLVALPKSKWMNVDPHPIHLGDEQHSQYSKLLLASKEQVLHRVLEEKV  
ALEQQLAEEKHTPESCFIEAAIQELKTREEALSGLAGSRREVTGVVAALEQLVLMAPLAKESVFQPRKGVLEYLS  
AFDEETTEVCSLDTPSRPLALPLVEEEEAVSEPEPEGLPEACDDLELADDNLKEGTICTESSQQEPITKSGFTRL  
SSSPCYFFYQAEDGQHMF LHPVNVRC LVREYGS LERSPEKISATVVEIAGYSMSDVRQRHRYLSHLPLTCEFSI  
CELALQPPVVSKETLEMFSDDIEKRKRQRQKKAREERRRERRIEIEENKKQKYPEVHIPLNLQQFPFNSYTC  
SSDSALGPTSTEGHGALSISPLSRSPGSHADFLLTPLSPTASQGSFSCVGSLEEDSPFP SFAQMLRVGKAKADV  
WPKTAPKKDENSELVPPAPVDSGSDNSDRVPVPSFQNSFSQAIEA AFMKLDTPATSDPLSEEKGGKKRKKQKQK  
LLFSTS VVHTK

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**FIGURE 3825**

GCCATGAACAGTGTGGGGGAGGCATGCACGGACATGAAGCGCGAGTACGACCAGTGCTTCAATCGCTGGTTCGCC  
GAGAAATTTCTCAAGGGGGACAGCTCCGGGGACCCGTGCACCGACCTCTTCAAGCGCTACCAGCAGTGTGTTTCAG  
AAAGCAATAAAGGAGAAAGAGATTCTATTGAAGGACTGGAGTTCATGGGCCATGGCAAAGAAAAGCCTGAAAAT  
TCTTCTTGACCTTGACAGTCACCTTGAAGGATTTTCGCAAGTCCAGAAATTGAGGACTCTGGATTTTTGTCAACTA  
ACTCTGTGAACATAGCCATCAGATTTGATGAGGAACCTTAGGAGAGAGGAGTTTTATTTCTCCTTCGATGTTTTT  
CTCTCAGTTGTAAAAGATGAACTCTTTGAGATGATTTCTCACCTGCTGTGGTATCTTGCAGGAACTGTGTGCTAA  
AATTGAACAATTTTTTTGAGATTATGGTTGCAATACCTGGCGTGGAATCAGCTTTACATAAATATACCTTGTATG  
CAAACGATGATAAACTAGTCAGGATGAGCAGAGCTGCCTGACCTCTTGATTTCTGCTGCAAAAGACATATACACT  
GTACTGGGGTCACATTTATGAAAGCAATTGGTTAGGACCTCTTTTTTTCTCTCAGGGAACCTAATGCTCTGAAA  
AGGGATCTGGGCACAACAGTTTCAGTGAGTGCTTTTGAGCACACTTTTATTTTATATAGTAACTAATGGTTAAG  
ATTGATGGTGGCCTGGATTAGCAAAGAGGAAGACAGCTTTTAACACAGTTCCTGCTTCACAAGAGGTGTCAGA  
TTAAGATGTGAAAGCTGCAAGAATGTTGCAGTGAACACCATTTTCAGAGCTCTCAGTGTGCAGTTCAGGAATTAAG  
ATACTTGGAATAGCTGTGGAGGAAGAACCTAAATTGCAAAGATCTGCTATTGCCAGCTCTCAACCCAAGTCAGTG  
AATTGTCAACCTGCATATCCTAAAAATGTCAAATGCTGCATCTGGTTAAATGTCGGGGTAGGGGGGAAGCTGAA  
GGTGCTCGCTTCATTTGCCCTGTTTACTCATCCTGCCCTGTAATGCTGTGAATCCTGAAGATGGAATAAATTGTA  
ACATTTAGTTTCTATCATT



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**FIGURE 3826A**

GGCATGGATGGTAGAGAGGGGAGCTGGCACTTGAACCTCAGGTCTGGCTCGACCTCAGAATGAGTGATCTTGTGTCTCTGTGCCCCAGGACTGCATCCTCTCACCAATACTTCACCAGCCTAGGGATCTGTGCTCCCAAGAGCCTGTTGACATTGTAAACCTGAATCCAATCCATAAACCAAAAGCCCAGGCTTAGAATCACATTGTGGTGGAGCGGGTGTGGTGGAGTCCCTGATTCAAAATGTTTGACAAGGAAGCCTGACCATTGTCTTCTGTTGGGTGTTTGGAGTCCAAGAGACCTGAGATCAGAGTCCAGCATTGTCACTTCATCCAGCCTTGGCAGTGTGGGATGTGACTCTGCCTCTGAACCGCAGTTATACCATCTGTGCTGGTGGCGTTGTGAGGATGGCAGGTAACAAAGACGCCCTGCTGGCGGACTTGGAGTCTACACCTCCACATCTCCAAACGGCCTGTGTTCTTGTGCGAGGAGACCCCTACTCATACCCAACCTGGAACCCACACATACCAGGAGATTGCCGTGCCACCCCCGTCCCCCACCCTCCAGCGAGGCCCTCAATGGCACAATCCTTGACCCCTTAGACCAGTGGCAGCCAGCAGCTCCCGATTTCATCCACCAGCAGCCTCAGTCCTCATCACTGTGTACGGCTCCAGTGCCAAAACCTCCAGTGTCTCCAACCTCAGGACAGTGTGGCTCTCCGTGCTCCCGAGTGGGTGAGGAGGAGCAGCTCTACAGCTTCCCCAACAAAGCAGAAATCAGCTGAGCCTTACCACCGTAATGAGCAGTCCCTGGGCAGCAACCTTTCTGAACTCGACCGCCTGTGCTGGAAGTGAACGCTGTACAGCATAACCCGCCAGGCTTCCCTGCAGATGAGGCCAACTCAAGCCCCCGCTTCCCTGGGGCCCTGAGCCCCCTCTATGGTGTCCAGAGACTAACAGCCCTTGGGAGGCAAGCTGGGCCCCCTGACGAAAGAGAAGCCTAAGCGGAATGGGGCCCGGGCCTGGAGGACGTGGGCCAGTGTGGAGAGTCTCTTGGATGAACTGGAGAGCTCCGTGCCAGCCCCGTCCCTGCCATCACTGTGAACAGGGCGAGATGAGCAGCCCGCAGCGCGTCACCTCCACCCAAAGCAGACACGCATCTCGGCCCTCCTCTGCCACCAAGGAGCTGGACGAGCTGATGGCTTCGCTGTGCGATTTCAGGGCTCCTGGCCCCCTGGAGGAGGTGTACTTCTTGTTCTCCATCAGCTCATCTGTCCAGGAGGGAGAAAAGTACCCCATCCCTGTGCTGCCAGACACCGTACCCCGAGCCTCAGGAGTCTGACCAGCCCCCTCCGTGTCCACAGTTTCATGGCCCAGGGGAAGACAGGGAGCAGCTACCCCTGGGGCCCCCGAAGCCCGGGAGCCAGCTGGACAGCATGCTGGGGAGCCTGCAGTCTGACCTGAACAAGCTGGGGTCCGCCACAGTCGCCAAAGGAGTCTGCGGGCCCTGCAAGAAGCCCATCGCCGGGCAGGTTGTGACCGCCATGGGGAAGACGTGGCACCCCGAGCACTTCGTCTGCACCCACTGCCAGGAGGAGATCGGATCCCGGAACCTTCTCGAGCGGGATGGACAGCCCTACTGTGAAAAGGACTACCACAACCTCTTCTCCCCGCGCTGCTACTACTGCAACGGCCCCATCTGGATAAAGTGGTGACAGCCCTTGACCGGACGTGGCACCCTGAACACTTCTTCTGTGACAGTGTGGAGCCTTCTTTGGTCCCCGAAGGGTTCACAGAGAAGGACGGCAAGGCCTACTGTGCAAGGACTACTTCGACATGTTTCGCACCCAAGTGTGGCGGCTGCGCCCGGGCCATCCTGGAGAACTATATCTCAGCCCTCAACACGCTGTGGCATCCTGAGTGCTTTGTGTGCCGGGAATGCTTCACGCCATTTCGTGAACGGCAGCTTCTTCGAGCAGCAGCGGCAGCCCTACTGTGAGGTGCACTACCACGAGCGCGCGGCTCGCTGTGTTCTGGCTGCCAGAAGCCCATCACCGCGCTGCATCACCGCCAAGGCCAAGAAGTTCACCCCGAGCACTTCGTCTGTGCCTTCTGCCTCAAGCAGCTCAACAAGGGCACCTTCAAGGAGCAGAACGACAAGCCTTACTGTGCAAGTGTCTTCTCAAGCTCTTCTGCTAGGTGCCCTGCCCTGTCTCTGCCCCCTTCCCCAGCCAGCATCCCCAACTGCGACTGTGACCTAGAGACTTACCCCGGGGTGAAGGGGTAAACCCGACTGAAACTGGAACCTTGTCTCCGTGGTGGCGGATGGACAGAGGGCCGTGAGGGGTCCCCGTGCTGTCTTCACCCCTGCCAGAGCCTCTGGGCCCCCTCCTCCCTCCTGTAGCTCTCCCTAGGCTGCCACTCTCCATCCTCCCCAGGGTAGAGGCTGGGGCTCCACCCAGCCCATGTACGTCCCCACGAAGTGGCCTGGCCAGCACCCACACTGGAGCCATCTCTTCTCATATTTTCAGCAGTGCAGCCGGGGGAGGGAAGGGCAGGCAGGGTCTGTTGGGGTCTCTTTTATCCTTATTCTCCCCGACCTAATTGTCTTTGTTCTGTGATTATTGGGGGACACCGGCTCCCTCCAGACAATGCCAGCATAAATCCATCCATCCAAAGGCAGAGAACCAAGGGGCCATGGAAGGTTCTCTGTGCTCCTCCTACCCTTCCAGTGCCCTAGGCTGGCGACTGCCCTGCCTTTTAGACCCGCCCTCCCCCTTTATACCTGCTCTGTCTTACTGAGAAAAGCCTCTCCAGCAATAATGTTTTCTAGTCACTTCCCTCCGTCTCCGGGACGGCGTGCCTGGACACTGTACCGACTTTGATAGATTTCTACACTGAGGTTTGAATTCATATCGCCTGAGTTGCTTTTACTTCTCTATACAAAATGATTTTGAAGAGATTTTAAAGACGTTCCCTTTTGTATTCTCTTCCCTCATCCACCGCCACTGGGCCTGTCACTGATGTGGCTCTGGTGTGAAGTTTGCTTTGTACTGAGGGTTGGGTGGGGAAGCAATTGTATTTTATTGTTTCTTAGCACAAGCAGGTGAACCTGGGAGCAGCTCTGTGACTCCCCCTCTTCACTTCATAGCTCACCAGGACTGTTTTATAAACTGCTGTATTTGGAAACCCCTTCTTACTTCCCAGGCCAGCAAGCTCTTCACTGAAACTGGTTGAAGGGTGTTCACCCCTTTGGGCCTAGAATTCTGAACTTTATCTGTTCTGTTCTGTGGGAGGAGAAGGGGAAGTATGTTTTGGGGGCTGTCTCTGTCTGAGTAAGCCCTCAGGAGCCTCTGTCCCCTGTGAACCCACTGAACCTTCTGAGCCCCACGTCTCTATGGGGCTCTCTCTTCTGCCTTCTCAGGAAAGCTGGTGTCTGATTTGGCCATCAGGACTCTGACGCTCTTTGGTCTTGTGATTCTCTGCGCATATCCCTTCCCCAGATCTGCTCCTCCCTTTCACAGGTGGGATCGG

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**FIGURE 3826B**

CACTCAGGGGGTCTGGAAAGAAGGTCATAAGGGAGCATGATAGGATTGGGGCAGAGGGACAGGCTCCTCTGGGG  
AAACCCCCAGAGCTCTTTACCAAGGATGAAAGAGGAGCCAGGCCTTGGGCTCCTGATGAGGAGAAAGGGGCCCC  
ACCGGGGTCTAATGGTGACAGTCCAAACCACTCCACTGGCCTCCTGGCAGAAGCCGAGTGTGCTGGGGTCTCCGA  
AGAGGGTCCCTCCTTTTTGGGGGAAGGTCAGCCCAGCCCCTCCAAAGGCTGATGTCTCCACTTTCACCCGCAGG  
CCTTACCGCTCTGTTTATAGTGACCCACCCTAGATCTTCCCAAGAGGGACTGGGGTTTCTGGGGTCCATTCTCT  
GAGTCAGTGGTTATTTGAAAATTTGATTTTGATTTTATTTTTCTCTGTAAACTTCCAAGCTGGCTTTTCCCAT  
TCAATTCCTGTGATTTATGCCAATAAAGTTTGCCCATG

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**FIGURE 3827**

CCTTCTCTCGCCAGGCGTCTCTCGTGGAAGTGACATCGTCTTTAAACCCTGCGTGGCAATCCCTGACGCACCGCCG  
TGATGCCCCAGGGAAGACAGGGCGACCTGGAAGTCCAACACTTTCCTTAAGATCATCCAACACTATTGGATGATTATC  
CGAAATGTTTCATTGTGGGAGCAGACAATGTGGGCTCCAAGCAGATGCAGCAGATCCGCATGTCCCTTCGCGGGA  
AGGCTGTGGTGCTGATGGGCAAGAACACCATGATGCGCAAGGCCATCCGAGGGCACCTGGAAAAACAACCCAGCTC  
TGGAGAAACTGCTGCCTCATATCCGGGGGAATGTGGGCTTTGTGTTACCAAGGAGGACCTCACTGAGATCAGGG  
ACATGTTGCTGGCCAATAAGGTGCCAGCTGCTGCCCCGTGCTGGTGCCATTGCCCCATGTGAAGTCACTGTGCCAG  
CCCAGAACACTGGTCTCGGGCCCCGAGAAGACCTCCTTTTTCCAGGCTTTAGGTATCACCCTAAAACTCTCCAGGG  
GCACCATTGAAATCCTGAGTGATGTGCAGCTGATCAAGACTGGAGACAAAGTGGGAGCCAGCGAAGCCACGCTGC  
TGAACATGCTCAACATCTCCCCCTTCTCCTTTGGGCTGGTCATCCAGCAGGTGTTGACAATGGCAGCATCTACA  
ACCCTGAAGTGCTTGATATCACAGAGGAAACTCTGCATTCTCGCTTCCTGGAGGGTGTCCGCAATGTTGCCAGTG  
TCTGTCTGCAGATTGGCTACCCAACCTGTTGCATCAGTACCCATTCTATCATCAACGGGTACAAACGAGTCCTGG  
CCTTGTCTGTGGAGACGGATTACACCTTCCCACTTGCTGAAAAGGTCAAGGCCTTCTTGGCTGATCCATCTGCCT  
TTGTGGCTGCTGCCCCCTGTGGCTGCTGCCACCACAGCTGCTCCTGCTGCTGCTGCAGCCCCAGCTAAGGTTGAAG  
CCAAGGAAGAGTCGGAGGAGTCGGACGAGGATATGGGATTTGGTCTCTTTGACTAATCACCAAAAAGCAACCAAC  
TTAGCCAGTTTATTTGCAAAACAAGGAAATAAAGGCTTACTTCTTTAAAAA

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**FIGURE 3828**

MPREDRATWKSNYFLKIIQLDDYPKCFIVGADNVGSKQMQQIRMSLRGKAVVLMGKNTMMRKAIRGHLENNPAL  
EKLLPHIRGNVGFVFTKEDLTEIRDMLLANKVPAAARAGAIAPCEVTVPAQNTGLGPEKTSFFQALGITTKISRG  
TIEILSDVQLIKTGDKVGASEATLLNMLNISPFSGGLVQQVFDNGSIYNPEVLDITEETLHSRFLEGVRNVASV  
CLQIGYPTVASVPHSIINGYKRVLALSVETDYTEPLAEKVKAFLADPSAFVAAAPVAAATTAAPAAAAAPAKVEA  
KEESESEDEDMGFGLFD

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**FIGURE 3829**

AGGCCCGGGACCGCGGGATGGGTGTCGGCGTGACCAGGCCTGAGCTCCCTGTCTCTCCTCAGTGACATCGTCTTT  
AAACCCCTGCGTGGCAATCCCTGACGCACCGCCGTGATGCCCAGGGAAGACAGGGCGACCTGGAAGTCCAACACTACT  
TCCTTAAGATCATCCAACCTATTGGATGATTATCCGAAATGTTTCATTGTGGGAGCAGACAATGTGGGCTCCAAGC  
AGATGCAGCAGATCCGCATGTCCCTTCGCGGGAAGGCTGTGGTGCTGATGGGCAAGAACACCATGATGCGCAAGG  
CCATCCGAGGGCACCTGGAAAACAACCCAGCTCTGGAGAACTGCTGCCTCATATCCGGGGGAATGTGGGCTTTG  
TGTTACCAAGGAGGACCTCACTGAGATCAGGGACATGTTGCTGGCCAATAAGGTGCCAGCTGCTGCCCCGTGCTG  
GTGCCATTGCCCCATGTGAAGTCACTGTGCCAGCCCAGAACACTGGTCTCGGGCCCCGAGAAGACCTCCTTTTTCC  
AGGCTTTAGGTATCACCACTAAAATCTCCAGGGGCACCATTGAAATCCTGAGTGATGTGCAGCTGATCAAGACTG  
GAGACAAAGTGGGAGCCAGCGAAGCCACGCTGCTGAACATGCTCAACATCTCCCCCTTCTCCTTTGGGCTGGTCA  
TCCAGCAGGTGTTTCGACAATGGCAGCATCTACAACCCTGAAGTGCTTGATATCACAGAGGAACTCTGCATTCTC  
GCTTCCTGGAGGGTGTCCGCAATGTTGCCAGTGTCTGTCTGCAGATTGGCTACCCAACTGTTGCATCAGTACCCC  
ATTCTATCATCAACGGGTACAAACGAGTCCTGGCCTTGTCTGTGGAGACGGATTACACCTTCCCACCTTGCTGAAA  
AGGTCAAGGCCTTCTTGGCTGATCCATCTGCCTTTGTGGCTGCTGCCCCCTGTGGCTGCTGCCACCACAGCTGCTC  
CTGCTGCTGCTGCAGCCCCAGCTAAGGTTGAAGCCAAGGAAGAGTCGGAGGAGTCGGACGAGGATATGGGATTG  
GTCTCTTTGACTAATCACCAAAAAGCAACCAACTTAGCCAGTTTTATTGCAAAAACAAGGAAATAAAGGCTTACT  
TCTTTAAAAA

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**FIGURE 3830**

MPREDRATWKSNYFLKIIQLDDYPKCFIVGADNVGSKQMQQIRMSLRGKAVVLMGKNTMMRKAIRGHLENNPAL  
EKLLPHIRGNVGFVFTKEDLTEIRDMLLANKVPAAARAGAIAPCEVTVPAQNTGLGPEKTSFFQALGITTKISRG  
TIEILSDVQLIKTGDKVGASEATLLNMLNISPFSGGLVIQQVFDNGSIYNPEVLDITEETLHSRFLGVRNVASV  
CLQIGYPTVASVPHSIINGYKRVLALSVETDYTEFLAEKVKAFLADPSAFVAAAPVAAATTAAPAAAAAPAKVEA  
KEESESEDEDMGFGLFD

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**FIGURE 3831**

GGCACGAGGAAGCGGTTGGGAAAGTGTTCGGTTTATCTTCGCGCCCCCTTGCGTTCTTGCCGCGGCTTGCCCTGGGCA  
GGTAAAGCGCGATTGCGAGAGCTCGGCAACCTGCCGACTCAGCCGGAACCGGCTCCCGGCCCGAGGGGCGTGGT  
GTCCTGGTGCTCCGACTCCTTCCGCGAGGCTCCTTGGGACCCGCGGTTCCGGGAGTCCCTTGCTCAGGGTCCCTTT  
CCTGCAGTGAGGCGCCGTCCGCCTTCCCTGTGTCCCCGAGACCCCCATCATGGGCAATACCAGCAGTGAGCGCG  
CCGCGCTGGAGCGGCATGGTGGCCATAAGACGCCCCGGAGGGACAGCTCGGGGGGCACCAAGGACGGGGACAGGC  
CCAAGATCCTGATGGACAGCCCCGAAGACGCCGACCTCTTCCACTCCGAGGAAATCAAGGCACCAGAGAAGGAGG  
AATTCCTGGCCTGGCAGCATGATCTGGAAGTGAATGATAAAGCTCCCGCCAGGCTCGGCCAACGGTGTTTCGAT  
GGACGGGGGGCGGAAAGGAAGTTTACTTATCTGGGTCTTCAACAACCTGGAGTAAACTTCCCTCACCAGAAGCC  
ACAATAACTTTGTAGCCATCCTGGATCTGCCGGAAGGAGAGCATCAGTACAAGTTCTTTGTGGATGGTCAGTGGA  
CGCAGGACCTTCCGAGCCCATAGTAACCAGCCAGCTTGGCACAGTTAACACATCATTCAAGTGAAGAAAACCTG  
ACTTTGAAGTATTTGATGCTTTAATGGTGGATTCCCAAAAGTGCTCCGATGTGTCTGAGCTGTCCAGTTCTCCCC  
CAGGACCTTACCATCAGGAGCCCTACGTCTGCAAACCCGAAGAGCGCTTTCGGGCACCCCTTATTCTCCCCCAC  
ATCTCCTCCAGGTATCCTGAACAAGGACACGGGGATTTCCTGTGATCCAGCTTTGCTTCCTGAGCCCAATCAGC  
TCATGCTGAACCACCTATACGCGCTGTCTATCAAGGATGGAGTGATGGTGCTCAGCGCAACCCACCGGTACAAGA  
AGAAGTACGTACCACCTTGTTATACAAGCCCATATGAAGAGCTGGGGGCGGATGGTGGCCAGGAGACAGCACA  
CCACCAGGCTCCACACGTGCATGCTTTCCCAAGAGGGAATGGACTGTACATTGCTCATTTCACACICTTTCAGAA  
GACATTTTCATACCTGCCCTGGTCTGCTTGAAGGTTTGTCCAGGCAGAGCAGCTCCTGCAGCGCCTCGGTCTGTG  
ACAGTCCCTCCTAGCACCCCATAGGCTTTGAGCCTCGGGGACTCATCAAGTCCAAGAAAAGAGGGAGGGGTGGCAG  
AGGATCTGCAGCCCTGGCCCCGCGGTGCATGAGGCTGGGTGCAGTTCTAAACCTACATTCTCGATTTTTCTTAAG  
CCAAAAATGAATGCTAACTCCTTTGCCAGTAAATTCTGGGAAACAGGGACTGAGGCCACACATCATTTCAGTC  
ATCTGTGTGTTTTTAAGGCCAGCCACTTGTCCCTGTTGAGGCTGGCTATGGAACTAAATACAGTGTTGGTCTTG  
CCTGTCTTCAAAATCAACAACAGATTGTCTCTCGGCTCCAGGGAGGTGTCAATTTCTATAGAAATTAGAAGCTTT  
CTGATTTCTAGATGAGGTTTTACAATTGTTTCTTACAGTCATGTGCACTAAGTACTCTTTTTGTAAAGCAGAGGTG  
GCTGGCTCTGCAGCCTTAAGGCCATTTTTTAAGTCACCACGTCTAGAAGTCACATGAACTCTGCTCAGCAATAAT  
CTGTTCTCAGAACAGACTTTTCAACCTGCTGCCGATTCTCCATTACAGCTGGATGATCCTCAGGACTGACCAGT  
TAGCTGGCAGGTTGTCCAGCTTTTTATTCCAGTCATAATAGGTGACAGTGTTAACCGTGAAAACCTTGAGAGGCAC  
TCTGCCCTCTTCCCTATAAAATCACACAGCGTGATTTTACAAGGTCCCGTGGCACCTTGCTCAGGACCTCTGCCC  
CTAGTTAGCAAGACTGCAGCAGTTGCTGTGCTTATTCTGAAAGGAATGTAGAACTTGACAGCAGCCTTCTGAGT  
CTGGGTGAGGAAGATGTCTTTGGACCAAAGCAGACTTCTGTATACGCAGCTCAGTTTCCCGGGAGTCGCCACAG  
ATGTACCCACTAGCCCAGGTTGCTGTGAGTCAGCGGAAGCTCCCGTTATGCCCTTTGCTCCTGGTGGGAGAGGGA  
GGAGTGAGCTCCCTGGGTTCAGTATTTACTTGGTATACCTGAGTTTGGGGGTACCCTTTTTTGTGACTTTTCAA  
AACAGTGAATTACTGTACCTTGATGGACAAGTTTCAATAAACTTTGTAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3832**

MGNTSSERAALERHGGHKTPRRDSSGGTKDGRPKILMDSPEADLFHSEEIKAPEKEEFLAWQHDLEVNDKAPA  
QARPTVFRWTGGGKEVYLSGSFNNWSKLPLTRSHNNFVAILDLPEGEHQYKFFVDGQWTHDPSEPIVTSQLGTVN  
NIIQVKKTD FEVFDALMVDSQKCDVSELSSPPGPYHQEPYVCKPEERFRAPPILPPHLLQVILNKDTGISCDP  
ALLPEPNHVMLNHLIALSIKDGVMLVSATHRYKKKYVTLLYKPI



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**FIGURE 3833**

GTTCCGGGAGTCCCTTGCTCAGGGTCCCTTTTCCTGCAGTGAGGCGCCGTCCGCCTTCCCTGTGTCCCCGCAGACC  
CCCATCATGGGCAATACCAGCAGTGAGCGCGCCGCGCTGGAGCGGCATGGTGGCCATAAGACGCCCCGGAGGGAC  
AGCTCGGGGGGCACCAAGGACGGGGACAGGCCCAAGATCCTGATGGACAGCCCCGAAGACGCCGACCTCTTCCAC  
TCCGAGGAAATCAAGGCACCAGAGAAGGAGGAATTCCCTGGCCTGGCAGCATGATCTGGAAGTGAATGATAAAGCT  
CCCGCCCAGGCTCGGCCAACGGTGTTCGATGGACGGGGGGCGGAAAGGAAGTTTACTTATCTGGGTCCCTTCAAC  
AACTGGAGTAACTTCCCCTCACCAGAAGCCACAATAACTTTGTAGCCATCCTGGATCTGCCGGAAGGAGAGCAT  
CAGTACAAGTTCTTTGTGGATGGTCAGTGGACGCACGACCCCTCCGAGCCCATAGTAACCAGCCAGCTTGGCACA  
GTTAACAACATCATTCAAGTGAAGAAAAGTACTTTGAAGTATTTGATGCTTTAATGGTGGATTCCCCAAAGTGC  
TCCGATGTGTCTGAGCTGTCCAGTTCTCCCCCAGGACCCCTACCATCAGGAGCCCTACGTCTGCAAACCCGAAGAG  
CGCTTTTCGGGCACCCCTATTCTCCCCCACATCTCCTCCAGGTTCATCCTGAACAAGGACACGGGGATTTCCTGT  
GATCCAGCTTTGCTTCCTGAGCCCAATCACGTGCTGCTGAACCACTATACGCGCTGTCTATCAAGGATGGAGTG  
ATGGTGCTCAGCGCAACCCACCGGTACAAGAAGAAGTACGTACCACCTTGTTATACAAGCCCATATGAAGAGCT  
GGGGGCGGATGGTGGCC

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**FIGURE 3834**

ATGGCCAGCGTCCACGAGAGCCTCTACTTCAATCCCATGATGACCAATGGGGTTGTGCACGCCAATGTGTTCCGGC  
ATCAAGGACTGGGTGACGCCGTACAAGATCGCGGTGCTGGTGCTGCTGAACGAGATGAGCCGCACAGGCGAGGGC  
GCCGTACAGCCTCATGGAGCGGCGGAGGCTCAACCAAGCTGCTCCTGCCCTGCTGCAGGGCCCAGATATTACACTG  
TCAAAACTTTACAAGTTAATTGAAGAGTCTTGTCCACAGCTGGCAAATTCAGTGCAGATCAGAATCAAACGTATG  
GCTGAAGGCGAGTTGAAGGATATGGAACAGTTTTTTGATGACCTTTCAGATTCTTTCTCTGGAAGTGAACCAGAG  
GTTTACAAAACAAGTGTAGTAGGTTTGTCTGCGTCACATGATCTTGGCCTACAGTAAGCTTTCTTTACGCCAA  
GTGTTTAAACTGTACACTGCCCTTCAGCAGTACTTCCAGAATGGTGAGAAAAAGACAGTGGAGGATGCTGATATG  
GAACTGACCAGTAGAGATGAGGGTGAAAGAAAAATGGAAAAAGAAGAACTTGATGTATCTGTAAGAGAAGAGGAG  
GTATCTTGCAAGTGGGCTCTGTCCCAAAAACAAGCAGAAATTTTTCTTTCTCAACAGGCTTCTTTGCTAAAGAAT  
GATGAGACTAAGGCCCTCACTCCAGCTTCCTTGCGAGAAGGAATTAACAATTTGTTGAAATTTAATCCTGATTTT  
GCTGAAGCGCATTATCTCAGCTACTTAAACAACCTCCGTGTCCAAGATGTTTTTCAGTTCAACACACAGTCTCCTC  
CATTATTTTGATCGTCTGATTCTTACCGGAGCCGAAAGCAAAAGTAATGGGGAAGAGGGCTATGGCCGGAGCTTG  
AGATACGCCGCTCTGAATCTTGCCGCCCTGCACTGCCGCTTCGGTCACTATCAACAGGCAGAGCTCGCCCTGCAG  
GAGGCAATTAGGATTGCCCAGGAGTCCAACGATCACGTGTGTCTCCAGCACTGTTTGAGCTGGCTTTATGTGCTG  
GGGCAGAAGAGATCCGATAGCTATGTTCTGCTGGAGCATTCTGTGAAGAAGGCAGTACATTTTGGGTTACCGTAC  
CTCGCCTCCCTGGGAATACAGTCCCTTGTTCAACAGAGAGCTTTTGCTGGGAAGACGGCAAACAAGCTGATGGAT  
GCCCTAAAGGACTCCGACCTCCTGCACTGGAAACACAGCCTGTCAGAGCTCATCGATATCAGCATCGCACAGAAA  
ACGGCCATCTGGAGGCTGTATGGCCGCAGCACCATGGCACTGCAACAGGCCCCAGATGTTGCTGAGCATGAACAGC  
CTGGAGGCGGTGAATGCGGGCGTGCAGCAGAACACACAGAGTCCTTTGCTGTGCACTCTGCCACCTCGCAGAG  
CTACACGCGGAGCAGGGCTGTTTTGCTGCAGCTTCTGAAGTGTTAAAGCACTTGAAGGAACGATTTCCGCCTAAT  
AGTCAGCACGCCAGTTATGGATGCTATGTGATCAAAAAATACAGTTTGACAGAGCAATGAATGATGGCAAATAT  
CATTTGGCTGATTCACTTGTTACAGGAATCACAGCTCTCAATAGCATAGAGGGTGTTTATAGGTAAG

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**FIGURE 3835**

GCCTGGGACTGTGTCTGTGCGCCATGGCCGCCGCGCTGCTCGCCCGGGCCTCGGGCCCTGCCCGCAGAGCTCTCT  
GTCCTAGGGCCTGGCGGCAGTTACACACCATCTACCACTCTGTGGAAGTGGCCGAGACACACCAGATGTTGCTCC  
AGACATGCCGGGACTTTGCCGAGAAGGAGTTGTTTCCATTGCAGCCCAGGTGGATAAGGAACATCTCTTCCAG  
CGGCTCAGGTGAAGAAGATGGGCGGGCTTGGGCTTCTGGCCATGGACGTGCCCGAGGAGCTTGGCGGTGCTGGCC  
TCGATTACCTGGCCTACGCCATCGCCATGGAGGAGATCAGCCGCGGCTGCGCCTCCACCGGAGTCATCATGAGTG  
TCAACAACCTCTCTCTACCTGGGGCCCATCTTGAAGTTTGGCTCCAAGGAGCAGAAGCAGGCGTGGGTACGCCTT  
TCACCAGTGGTGACAAAATTGGCTGCTTTGCCCTCAGCGAACCAGGGAACGGCAGTGATGCAGGAGCTGCGTCCA  
CCACCGCCCGGGCCGAGGGCGACTCATGGGTCTGAATGGAACAAAGCCTGGATCACCATGCTGGGAGGCTT  
CGGCTGCGGTGGTCTTTGCCAGCACGGACAGAGCCCTGCAAAACAAGGGCATCAGTGCCCTTCCCTGGTCCCCATGC  
CAACGCCTGGGCTCACGTTGGGAAGAAAGAAGACAAGCTGGGCATCCGGGGCTCATCCACGGCCAACCTCATCT  
TTGAGGACTGTGCGCATCCCCAAGGACAGCATCCTGGGGGAGCCAGGGATGGGCTTCAAGATAGCCATGCAAACCC  
TGGACATGGGCCGCATCGGCATCGCCTCCCAGGCCCTGGGCATTGCCCAGACCGCCCTCGATTGTGCTGTGAAGT  
ACGCTGAGAATCGCATGGCCTTCGGGGCGCCCCCTACCAAGCTCCAGGTATCCAGTTCAAGTTGGCAGACATGG  
CCCTGGCCCTGGAGAGTGCCCGGCTGCTGACCTGGCGTGCTGCCATGCTGAAGGATAACAAGAAGCCTTTCATCA  
AGGAGGCAGCCATGGCCAAGCTGGCCGCCTCGGAGGCCGCGACCGCCATCAGCCACCAGGCCATCCAGATCCTGG  
GCGGCATGGGCTACGTGACAGAGATGCCGGCAGACGGCACTACCGCGACGCCCGCATCACTGAGATCTACGAGG  
GCACCAGCGAAATCCAGCGGCTGGTGATCGCCGGGCATCTGCTCAGGAGCTACCGGAGCTGAGCCCGGGCGGAC  
TGCCCCAGGACTGCGGGAAGGCGCGGGAGCCAGGGGCCTCCACCCCAACCCCGGCTCAGAGACTGGGCGGGCCGG  
CGGGGGCTCCCTGGGGACCCAGATGGGCTCAGTGCTGCCACCCAGATCAGATCACATGGGAATGAGGCCCTCCG  
ACCATTGGCAGCTCCGCCTCTGGGCCTTTCCGCCTCCTCACCCTGTGCCTCAAGTTCCCTCATCTAAGTGGCCCT  
GGCCTCCTGGAGGCGGGGTTGTGGGGGGGCTGAGCGACACTCAGGGACACCTCAGTTGTCCTCCCGGGGGCCCTG  
GTGCCCTGGCATGAAGGCCAGTGCGACAGGCCCTTGGTGGGTCTGTCTTTTCCCTGAGGTGAGAGTCAAGGAG  
CAGGGCTGGGGTCAGGATGACGAGGCCTGGGGTCTGGTGTGGGCAGGTGGTGGGGCTGGGCCATGGAGCTGGC  
CCAGAGGCCCTCAGCCCTTTGTAAAGTCTGATGAAAGCAGGGGTGGTGATTGCTGTGTGACTGACTGTGGG  
TAATAAACACACCTGTCCCC

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**FIGURE 3836**

GTTCTGAGGTGGGAGGCGGTACCCGTGGCTGAGAAGAAGGAGGCCTGAGAGCGACATGTCCCCGGCGGCTCAGG  
CGGAGCGGCCCCGTGGCGCTGTTTTCTGAGTCCGGGGTGGCCTGGCAGCCGGCCGAGGACGAGGGTCGGCGGGGG  
CTGCCCCCGTGGTGGTGGCCGCCATGCTGGGAGCCTGGGCGGTTGAGGGAACCGCTGTGGCGCTCCTGCGACTGC  
TGCIGCTGCTGCTGCCGCCGGCGATCCGGGGACCCGGGCTCGGCGTGGCCGGCGTGGCCGGCGGGCGGGGGCCG  
GGCTGCCCGAGAGCGTCATTTGGGCGGTCAACGCGGGTGGAGAGGCGCATGTGGACGTGCACGGGATCCACTTCC  
GCAAGGACCCTTTGGAAGGCCGGGTGGGCCGAGCCTCAGACTATGGCATGAACTGCCAATCCTGCGTTCCAACC  
CTGAGGACCAGATCCTGTATCAAACCTGAGCGGTACAATGAGGAGACCTTTGGCTACGAAGTGCCCATCAAAGAGG  
AGGGGGACTACGTGCTGGTCTTGAAATTTGCAGAGGTCTACTTTGCACAGTCCCAGCAAAGGTATTTGATGTAC  
GATTGAATGGCCACGTGCTGGTGAAGGACTTGGATATCTTTGATCGTGTGGGCATAGCACAGCTCACGATGAAA  
TTATACCTATGAGCATCAGAAAGGGGAAGCTGAGTGTCCAGGGGAGGTGTCCACCTTCACAGGGAACTCTACA  
TTGAGTTTGTCAAGGGTACTATGACAATCCCAAGGTCTGTGCACTCTACATCATGGCTGGGACAGTGGATGATG  
TACCAAATCTTCATTCCAACCCTCTTCTGCCCTCTGCCGTTGTGAGAACAAATGACTATCCTGAACAGGGTGGAG  
GGGTGTGGGAAAGAAACCAGCCATATTGGTTTTGGTTTCTGTATTTTCACAATGATTAATGAACAAAAACAAAG  
AGAAAAAACACACATCAATTAAAGGAGACAAAAAGAG

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**FIGURE 3837**

GGCACGAGGCATGGGCGGAGCCGTAGTTACGGTCGACTGGGGCGTCGTCCCTAGCCCGGGAGCCGGGTCTCTGGA  
GTCGCGCCCCGGGGTTACCGATGTCGACGAGGAAGCGAGGCAGAGCGGAGGCTCCTCGCAGGCCGGCGTCGTGA  
CTGTACGCGACGTCCAGGAGCTGATGCGCGCAAGGAGGAGATAGAAGCGCAGATCAAGGCCAACTATGACGTGC  
TGGAAAGCCAAAAAGGCATTGGGGATGAACGAGCCGCTGGTGGACTGTGAGGGCTACCCCGGTGACACGTGGACC  
TGTACCAAGTCCGCACCGCCAGGCACAACATCATATGCCTGCAGAATGATCACAAGGCAGTGTGAAGCAGGTGG  
AGGAGGCCCTGCACCAGCTGCACGCTCGCGACAAGGAGAAGCAGGCCCGGGACATGGCTGAGGCCACAAAGAGG  
CCATGAGCCGCAAACTGGGTGAGAGTGAGGCCAGGGCCCTCCACGGGCCTTCGCCAAAGTGAACAGCATCAGCC  
CCGGCTCCCCAGCCAGCATCGCGGGTCTGCAAGTGGATGATGAGATTGTGGAGTTCTGGCTCTGTGAACACCCAGA  
ACTTCCAGTCACTGCATAACATTGGCAGTGTGGTGCAGCACAGTGAGGGGAAGCCCCTGAATGTGACAGTGATCC  
GCAGGGGGGAAAAACACCAGCTTAGACTTGTTCACACGCTGGGCAGGAAAAGGACTGCTGGGCTGCAACATTA  
TTCCTCTGCAAGATGATTTGTCCCTGGGGAACAGTAACAGGAAAGCATCTTCCCTTGCCCTGGACTTGGGTCTAG  
GGATTTCACACTTGTCTTCTCCTGGAAGCATAAGGATCTGGAAGAGGCTTGTAACTGAACCTTCTGTGTGGTG  
GCAGTACTGTGGCCACAGTGTAATCTCCCTGGATTAAAGGCATTCTTAAAACTTAGGCTTGGCTCTTTTACA  
AATTAGGCCACGGCCCTAAATAGGAATTCCTGGATTGTGGGCAAGTGGGCGGAAGTTATTCTGGCAGGTACTGG  
TGTGATTATTATTATTATTTTAATAAAGAGTTTTACAGTGCTGATATGACCTGTGTGTCACCCAGCTGAATTT  
CTTATGACCTCCCAAACCAAAGCTCAGATGGGGTCAGAAGAGCTTCATAGAAAGTTGGGCAAAACAGGCTAGCA  
ATTGCAAAGTCAGGCTTTGACCAACATATTTCTTTGCACTGAGGCCTTGCTGCTGTGGATACGGAATGGTTAAG  
TACTGTGCTTCTCAGCAGCTGGGCTGTGAGGCCATAGTAGCTCCCTTTGGAGAACAGGGAAAGCCTGGAGGCT  
TCCCAGGTGGCCAGCGTGGTGTCTGTCAGCTTCTCTTTAGGAACCCACCAGAGGGCAGCAAGCTCCTTTTAC  
TTGCTAGTAAGAACCCCTCCGTTTTTGTGTGTTTTTGTGTTTTTGTGTTTCTGGAGACAAGGTCTTGCTTTGTACC  
CAGGCTGGAGTGAGTGTGCTGATCAAGGTTCACTGAAGCCTTGACGCTGTGGGCACTGCCTCAGCCGCCCAAGT  
ATCTGGGACCACAGGCGTGCACCACCATGCATAGCTAATTTATTTTTGTAGAGACAGGGTCTCCCTGTGTTGAC  
CAGGTTGGTCTCGAACTCCTGGGCTCAAGCAGTCCTCCTGCCTTGGCCTCCTAAAGTGCTGGGATCACAGGCGTG  
AGCCACTGCGCCAGCCCACTGCTAGTTTGACTTTTTATAATTGAACCTCCTGGCTATGCCCTGAGATCAGCGCT  
ATTTTGTAAACCGCTGAGGTATGGATAGGAACGAGTAGATCAGACCTCTTGAAAATGCTTATTCTTCTCCCTTT  
TATTTTTTGTCTCTTTTAAGATGGTAAATGGTTCTCAGGGATTCTGCCAATACTTTGAATTATTTTTTCTCT  
CCATGGTATCAGTGTTCAATTTCCCAAGTTCTTGACACCGCTTCTGTTTTGGCAGTTCTGCCAGGCAAGCCCTG  
TGTTCTTGGGACTGGTTTTGCTGTGTTGGATACAGATACCAGCTTGCCTTGATGGGATTGGTATTGCTGTGTG  
CTTCCAGCCACAGGTTCTCAGACTCAATTCCAAAGCCTTCCTATTGGGCGAATTCCTCAAACCTATTGACCT  
GACAGCCATACGTATTCCTCTGGTAGCCACAGACATGCTGTGTTTACCAATGTTTGCTGTTTAAATTGCATGT  
TCTAATTCACGTATTTCCAGTCTCTTTTATAAAGTCTCAGACTATAATAAACACAGCTTGCCAGTTAAAAAA  
AAAAAAAAAAAA

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**FIGURE 3838**

MSDEEARQSGGSSQAGVTVSDVQELMRRKEEIEAQIKANYDVLESQKGIGMNEPLVDCEGYPRSDVDLYQVRTA  
RHNIICLQNDHKAVMKQVEEALHQLHARDKEKQARDMAEAHKEAMSRKLGQSESQGPPEAFKVNISPGSPASI  
AGLQVDDEIVEFGSVNTQNFQSLHNIGSVVQHSEGKPLNVTVIRRGKHLRLVPTRWAGKLLGCNIIPLQR

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**FIGURE 3839**

GTGCGTCTGGCGTCCGCGCGCTGCACAATGGCGGCTCTGAAGAGTTGGCTGTGCGCGCAGCGTAACTTCATTCTTC  
AGGTACAGACAGTGTTTTGTGTGTTCCCTGTTGTGGCTAACTTTAAGAAGCGGTGTTTCTCAGAATTGATAAGACCA  
TGGCACAAACTGTGACGATTGGCTTTGGAGTAACCTGTGTGCGGTTCCCTATTGCACAGAAATCAGAGCCTCAT  
TCCCTTAGTAGTGAAGCATTGATGAGGAGAGCAGTGCTTTGGTAACAGATAGCACCTCTACCTTTCTCTCTCAG  
ACCACATATGCGTTGATTGAAGCTATTACTGAATATACTAAGGCTGTTTATACCTTAACTTCTCTTTACCGACAA  
TATACAAGTTTACTTGGGAAAATGAATTCAGAGGAGGAAGATGAAGTGTGGCAGGTGATCATAGGAGCCAGAGCT  
GAGATGACTTCAAAACACCAAGAGTACTTGAAGCTGGAAACCACTTGGATGACTGCAGTTGGTCTTTTCAGAGATG  
GCAGCAGAAGCTGCATATCAAACCTGGCGCAGATCAGGCCTCTATAACCGCCAGGAATCACATTCAGCTGGTGAAA  
CTGCAGGTGGAAGAGGTGCACCAGCTCTCCCGGAAAGCAGAAACCAAGCTGGCAGAAGCACAGATAGAAGAGCTC  
CGTCAGAAAACACAGGAGGAAGGGGAGGAGCGGGCTGAGTCGGAGCAGGAGGCCTACCTGCGTGAGGATTGAGGG  
CCTGAGCACACTGCCCTGTCTCCCACTCAGTGGGGAAAGCAGGGGCAGATGCCACCCTGCCCAGGGTTGGCATG  
ACTGTCTGTGCACCGAGAAGAGGCGGCAGATCCTGCCCTGGCCAATCAGGCGAGACGCCTTTGTGAGCTGTGAGT  
GCCTCCTGTGGTCTCAGGCTTGCGCTGGACCTGGTTCTTAGCCCTTGGGCACTGCACCCTGTTAACATTTACC  
CCACTCTGTACAGCTGCTCTTACCCATTTTTTTTTACCTCACACCCAAAGCATTTTGCCTACCTGGGTGAGAGAGA  
GGAGTCCTTTTTGTGATGCCCTTAAGTTCAGCAACTGTTAACCTGTTTTCAGTCTTATTTACGTCGTCAAAAAT  
GATTTAGTACTTGTCCCTCTGTTGGGATGCCAGTTGTGGCAGGGGGAGGGGAACCTGTCCAGTTTGTACGATTT  
CTTTGTATGTATTTCTGATGTGTTCTCTGATCTGCCCCACTGTCTGTGAGGACAGCTGAGGCCAAGGAGTGAA  
AAACCTATTACTACTAAGAGAAGGGGTGCAGAGTGTTTACCTGGTGCTCTCAACAGGACTTAACATCAACAGGAC  
TTAACACAGGCCCTCTTGTTCCCTTCTTTCCGTTTCTCTATTGTATCCAAAGGAGAAGAGTGTAAGATTTTG  
TTTGCATCTGAAAGAGAAAATGCGTCTCTCCTGG

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**FIGURE 3840**

MAALKSWLSRSVTSFFRYRQCLCVPVVANFKKRCFSELIRPWHKTVTIGFGVTLCAPPIAQKSEPHSLSSSEALMR  
RAVSLVTDSTSTFLSQTTYALIEAITEYTKAVYTLTSLYRQYTSLLGKMNSEEEDEVWQVIIGARAEMTSKHQY  
LKLETTWMTAVGLSEMAAEAAYQTGADQASITARNHIQLVKLQVEEVHQLSRKAETKLAEAQIEELRQKTQEEGE  
ERAESEQEAYLRED



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**FIGURE 3841A**

GTGAGTCGCGCGGACGGAGCCGGACAAAAGCGGGCGGGCGGGCAGGATGAACAGCATCAAGAACGTGCCGGCGC  
GGGTGCTGAGCCGAGGCCGGGCCACAGCCTGGAGGCCGAGCGAGCAGTTTCGACAAGACCCAGGCCATCAGCA  
TCAGCAAAGCCATCAACACCCAGGAGGCCCGGTGAAGGAGAAGCACGCCCGGCGCATCATTCTGGGCACACACC  
ACGAGAAGGGGGCTTTACCTTCTGGTCTACGCCATTGGGCTGCCGCTGCCAGCAGCTCCATTCTCAGCTGGA  
AGTTCTGCCACGTCTCTCCACAAGGTCTTTCGAGACGGGCACCCCAATGTGCTGCATGACTGCCAGCGGTACCGCA  
GCAACATCCGGGAGATTGGAGACCTGTGGGGACATTTCATGACCGCTACGGACAGCTGGTGAATGTCTACACCA  
AGCTGCTGCTGACCAAGATCTCTTCCACCTCAAGCATCCCCAGTTTCCCGCGGGCCTGGAGGTGACAGATGAGG  
TACTGGAGAAGGCAGCTGGGACCGATGTCAACAACATCTTCCAGCTCACTGTGGAGATGTTTGATTACATGGATT  
GTGAGCTGAAGCTTTCTGAATCAGTTTTCCGACAGCTCAACACGGGCCATCGCCGTATCCAGATGTCTCAGGCC  
AGTGCCGCTGGCCCCCTCATCCAGGTCACTCAGGACTGCAGCCACCTCTACCACTACAGGTCAAGCTCTGT  
TCAAGCTACACTCTTGTCTCCCTGCGGACACCCCTGCAAGGCCACAGGGACCGGTTCCACGAGCAGTTTCACAGCC  
TCAGGAACCTTCTCCGAGAGCCTCCGACATGCTGTACTTCAAGCGGCTCATCCAGATCCCCCGGCTGCCCGAGG  
GACCCCTAACTTCTGCGGGCCTCAGCCCTGGCTGAGCAGCATCAAGCCGGTGGTGGTGATCCCCGAGGAGGCC  
CGGAAGATGAGGAGCCGGAGAATCTCATTGAGATCAGCACAGGGCCCCCGCGGGGAGCCAGTGGTGGTGGCTG  
ACCTCTTCGATCAGACGTTTGGACCCCCAATGGGTCTGTGAAGGACGACAGGGACCTCCAGATTGAGAGCTTGA  
AGAGAGAGGTGGAATGCTCCGCTCTGAAGTGGAGAAGATCAAGCTGGAGGCCAGCGGTACATCGCGCAGCTGA  
AGAGCCAGGTGAATGCACTGGAGGGTGAAGTGGAGGAGCAGCGGAAGCAGAAGCAGAAGGCCCTGGTGGATAATG  
AGCAGCTCCGCCACGAGCTGGCCAGCTGAGGGCTGCCAGCTGGAGGGCGAGCGGAGCCAGGGCCTGCGTGAGG  
AGGCTGAGAGGAAGGCCAGTGCCACGGAGGCGCTACAACAAGCTGAAGGAAAAGCACAGTGAGCTCGTCCATG  
TGCACGCGGAGCTGCTCAGAAAGAACGCGGACACAGCCAAAGCAGCTGACGGTGACGCAGCAAAGCCAGGAGGAGG  
TGGCGCGGGTGAAGGAGCAGCTGGCCTTCCAGGTGGAGCAGGTGAAGCGGGAGTCGGAGTTGAAGCTAGAGGAGA  
AGAGCGACACAGCTGGAGAAGCTCAAGAGGGAGCTGGAGGCCAAGGCCGAGAGCTGCCCCGCGCAGGAGGCC  
TGAGCCACACAGAGCAGAGCAAGTCGGAGCTGAGCTCAGCGCTGGACACGCTGAGTGCGGAGAAGGATGCTCTGA  
GTGGAGCTGTGCGGCAGCGGGAGGCAGACCTGCTGCGGCGCAGAGCCTGGTGCGCGAGACAGAGGCGGCGCTGA  
GCCGGGAGCAGCAGCGCAGCTCCAGGAGCAGGGCGAGTTGCAGGGCCGGCTGGCAGAGAGGGAGTCTCAGGAGC  
AGGGGCTGCGGCAGAGGCTGCTGGACGAGCAGTTTCGAGTGTTCGCGGGCGCTGCTGCCGAGGCCGCGGCATCC  
TGCAGGATGCCGTGAGCAAGCTGGACGACCCCTGCACCTGCGCTGTACCAGCTCCCCAGACTACCTGGTGAGCA  
GGGCCAGGAGGCCTTGGATGCCGTGAGCACCCTGGAGGAGGGCCACGCCAGTACCTGACCTCCTTGGCAGACG  
CCTCCGCCCTGCTGGCAGCTCTGACCCGCTTCTCCACCTGGCTGCGGATACCATCATCAATGGCGGTGCCACCT  
CGACCTGGCTCCACCGACCTGCGGACCGCTCATAGACACCTGCAGGGAGTGCGGGGCCGGGCTCTGGAGC  
TCATGGGGCAGCTGCAGGACCAGCAGGCTCTGCGGCACATGCAGGCCAGCCTGGTGCGGACACCCCTGCAGGGCA  
TCCTTCAGCTGGGGCCAGGAAGTGAACCCAAAGAGCCTAGATGTGCGGCAGGAGGAGCTGGGGGCCGTGGTGCACA  
AGGAGATGGCGGCCACATCCGAGCCATTGAAGATGCTGTGCGGAGGATTGAGGACATGATGAACCAGGCACGCC  
ACGCCAGCTCGGGGGTGAAGCTGGAGGTGAACGAGAGGATCCTCAACTCCTGCACAGACCTGATGAAGGCTATCC  
GGCTCCTGGTGACGACATCCACTAGCCTGCAGAAGGAGATCGTGGAGAGCGGCAGGGGGGAGCCACGCAGCAGG  
AATTTTACGCCAAGAAGTTCGCGCTGGACCGAAGGCCTCATCTCGGCCTCAAGGCTGTGGGCTGGGGAGCCACAC  
AGCTGGTGGAGGCAGCTGACAAGGTGGTGTCTCACACGGGCAAGTATGAGGAGCTCATCGTCTGCTCCCACGAGA  
TCGCAGCCAGCACGGCCAGCTGGTGGCGGCCCTCAAGGTGAAGGCCAACAAGCACAGCCCCACCTGAGCCGCC  
TGCAGGAATGTCTCGCACAGTCAATGAGAGGGCTGCCAATGTGGTGGCCTCCACCAAGTCAGGCCAGGAGCAGA  
TTGAGGACAGAGACACCATGGATTCTCCGGCCTGTCCCTCATCAAGCTGAAGAAGCAGGAGATGGAGACCCAGG  
TGCGTGTCTGGAGCTGGAGAAGACGCTGGAGGCTGAACGCATGCGGCTGGGGGAGTTGCGGAAGCAACACTACG  
TGCTGGCTGGGGCATCAGGCAGCCCTGGAGAGGAGGTGGCCATCCGGCCCAGCACTGCCCCCGAAGTGTAAACCA  
CCAAGAAACCACCCCTGGCCCAGAAGCCAGCGTGGCCCCAGACAGGACCACAGCTTGACAAAAGGATGGCA  
TCTACCCAGCTCAACTCGTGAAGTACTAGGCCCCCAGGGGTCCAGCAGGCTGGTGGTACAGGCCTGGGCCTC  
TGCAACTGCCCTGACAGGACCGAGAGGCCTTGGCCCTCCACCTGGTGGCCAAGCCTCCGCCCCACCGTCTGGAT  
CAATGCTCTCAAGGCCCTTGGCCCTTACTGAGCCTGCAGGGTCTGGGCCATGTGGGTGGTGTCTCTGGATGTGA  
GTCTCTTATTTATCTGCAGAAGGAAGCTTTGGGGTGCAGCCAGGACCCGGTAGGCCTGAGCCTCAACTCTTCAGAA  
AATAGTGTTTTTAATATTCCTCTTCAGAAAATAGTGTTTTTAATATTCGAGCTAGAGCTCTCTTCTACGTTT

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**FIGURE 3841B**

GTAGTCAGCACACTGGGAAACCGGGCCAGCGTGGGGCTCCCTGCCTTCTGGACTCCTGAAGGTCGTGGATGGATG  
GAAGGCACACAGCCCGTGCCGGCTGATGGGACGAGGGTCAGGCATCCTGTCTGTGGCCTTCTGGGGCACCGATT  
TACCAGGCCCTCCAGCTGCGTGGTCTCCGCAGACCAGGCTCTGTGTGGGCTAGAGGAATGTCGCCCATTACTCCT  
CAGGCCTGGCCCTCGGGCCTCCGTGATGGGAGCCCCCAGGAGGGGTGAGATGCTGGAAGGGGCCGCTTTCTGGG  
GAGTGAGGTGAGACATAGCGGCCCGGGCGCTGCCTTCACTCCTGGAGTGAGTTTCCATTTCCAGCTGGAATCTGC  
AGCCACCCCATTTCTGTTTTCCATTCCCCGTTCTGGCCGCGCCCCACTGCCACCTGAAGGGGTGGTTTTCCA  
GCCCTCCGGAGAGTGGGCTTGGCCCTAGGCCCTCCAGCTCAGCCAGAAAAAGCCCAGAAACCCAGGTGCTGGACC  
AGGGCCCTCAGGGAGGGGACCCTGCGGCTAGAGTGGGCTAGGCCCTGGCTTTGCCCGTCAGATTTGAACGAATGT  
GTGTCCCTTGAGCCCAAGGAGAGCGGCAGGAGGGGTGGGACCAGGCTGGGAGGACAGAGCCAGCAGCTGCCATGC  
CCTCCTGCTCCCCCAGCCCTAGCCCTTTAGCCTTTCACCCCTGTGCTCTGGAAAGGCTACCAAATACTGG  
CCAAGGTCAGGAGGAGCAAAAATGAGCCAGCACCAGCGCCTTGGCTTTGTGTTAGCATTTCTCCTGAAGTGTT  
TGTTGGCAATAAAATGCACTTTGACTGTTTGTGTC

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**FIGURE 3842**

MNSIKNVPARVLSRRPGHSLEAEREQFDKTQAISISKAINTEAPVKEKHARRIILGTHHEKGATTFWSYAIGLP  
LPSSSILSWKFCHVLHKVLRDGHFNVLDHCQRYRSNIREIGDLWGHLDHRYGQLVNVYTKLLTKISFHLKHPQF  
PAGLEVTDEVLEKAAGTDVNNIFQLTVEMFDYMDCELKLSVFRQLNTAIAVSQMSSGQCRLAPLIQVIQDCSH  
LYHYTVKLLFKLHSCLPADTLQGHRDRFHEQFHSLRNFFRRASDMLYFKRLIQIPRLPEGPPNFRASALAEHIK  
PVVVIPEEAPEDDEEPENLIEISTGPPAGEPVVVDLFDQTFGPPNGSVKDDRDQLIESLKREVEMLRSELEKIKL  
EAQRYIAQLKSQVNALEGELEEQRKQKQKALVDNEQLRHELAQLRAAQLEGEERSQGLREEAERKASATEARYNKL  
KEKHSELVHVHAEELLRKNADTAKQLTVTQQSQEEVARVKEQLAFQVEQVKRESELKLEEKSDQLEKLKRELEAKA  
GELARAQEALSHTEQSKSELSSRLDTLSAEKDALSGAVRQREADLLAAQSLVRETEAALSREQQRSSQEQQELQG  
RLAERESQEQQGLRQRLLEQFAVLRGAAAEAGILQDAVSKLDDPLHLRCTSSPDYLVSRQAEALDAVSTLEEGH  
AQYLTSLADASALVAALTRFSLAADTIINGGATSHLAPTDPADRLIDTCRECGARALELMGQLQDQQALRHMQA  
SLVRTPLQGILQLGQELKPKSLDVRQEELGAVVDKEMAATSAAIEDAVRRIEDMMNQARHASSGVKLEVNERILN  
SCTDLMKAIRLLVTTTSTSLQKEIVESGRGAATQQEFYAKNSRWTEGLISASKAVGWGATQLVEAADKVVLHTGKY  
EELIVCSHEIAASTAQLVAASKVKANKHSPHLSRLQECSTVNERAANVVASTKSGQEQIEDRDTMDFSGLSLIK  
LKKQEMETQVRVLELEKTLEAERMRLGELRKQHYVLGASGSPGEEVAIRPSTAPRSVTTKKPPLAQKPSVAPRO  
DHQLDKKDGIIYPAQLVNY

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**FIGURE 3843**

GTCTCTCGAGAAGGCGGGGGGGCTGTCCGGCCCGCAGGGCGGTTCGAGCCCGGGCGGCCATGGCTCACGTCTG  
GCTCCCCGAAGCGCTCGAGGAGTCGCAGCCGGTCCCCGGGGACGGGGGTTCGGAAGAGAGAAAGAAGAGCAGGA  
AAGACACCTCGAGGAAGTCTCGGCCTCCACATCCCAAGAGAGAAGCAAGCAGAAGGCCCGGAGGAGAACAAGAT  
CCAGCTCCTCCTCTTCTTCCAGTTCTTCTAGCTCCTCTTCTTCTCCTCGTCTCCTCCTCTTCTCCTCAGTG  
ATGGCCGGAAGAAGCGGGGAAGTACAAGGACAAGAGGAGGAAGAAGAAGAAGAAGAGGAAGAAGCTGAAGAAGA  
AGGGCAAGGAGAAGCGGAAGCACAGCAGGTGGAGGCTCTGCCGGGCCCCCTCGCTGGACCAGTGGCACCGATCAG  
CTGGGGAGGAAGAGGATGGCCAGTCCTGACGGATGAGCAGAAGTCCCGAATCCAGGCCATGAAGCCCATGACCA  
AGGAGGAGTGGGATGCCCCGCAGAGCATCATCCGCAAGGTGGTGGACCCTGAGACGGGGCGCACCAAGGCTTATTA  
AGGGAGATGGCGAGGTCTTAGAGGAAATCGTAACCAAAGAACGACACAGAGAGATCAACAAGCAAGCCACCCGAG  
GGGACTGCCTGGCCTTCCAGATGCGAGCTGGGTTGCTTCCCTTGAGGGCCCCCGCTGGCCAAGGCCTGTGGACGAC  
GCTGGCGGCCAGCCTGGGCAGGTTTCAGGGTGCCAGTGGGAAGCCTGATGGGTGCTGGTGGCCTTCCCCCGTG  
GATTGGTCTCTGGCCAGCCAGTCTCTTCTCAGGGGCAGGGGTGGAGGTTGGGGTCACCGGCCTGCTTGGCAC  
CCCCATCTGAAAGAGCAGCACTTCTCAGCTATTAAAGGCCCCCTGGATAGAC

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**FIGURE 3844**

MAHVGSRKRSRSRSRGRGSEKRKKKSRKDTSRNCASATSQERSKQKARRRTRSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSDGRKKRGKYKDKRRKKKKRKKLKKKGKEKAEAAQQVEALPGPSLDQWHRSAAGEEDGPVLTDEQKSRIQAM  
KPMTKEEWDARQSIIRKVVDPETGRTRLIKGDGEVLEEIVTKERHREINKQATRGCCLAFQMRAGLLP

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**FIGURE 3845**

GCGTGGATGCAACTAGAGAGACAAATCGCCTAGGAAGACTGATCAATCACAGCAAATGTGGGAACTGCCAAACCA  
AACTGCACGACATCGACGGCGTACCTCACCTCATCCTCATCGCCTCCCGAGACATCGCGGCTGGGGAGGAGCTCC  
TGTATGACTATGGGGACCGCAGCAAGGCTTCCATTGAAGCCCACCCGTGGCTGAAGCATTAAACCGGTGGGCCCCG  
TGCCCTCCCCGCCCACTTTCCCTTCTTCAAAGGACAAAGTGCCCTCAAAGGGAATTGAATTTTTTTTTTACACA  
CTTAATCTTAGCGGATTACTTCAGATGTTTTTAAAAAGTATATTAAGATGCCTTTTCACTGTAGTATTTAAATAT  
CTGTTACAGGTTTCCAAGGTGGACTTGAACAGATGGCCTTATATTACCAAACTTTTATATTCTAGTTGTTTTG  
TACTTTTTTTGCATACAAGCCGAACGTTTGTGCTTCCCGTGCATGCAGTCAAAGACTCAGCACAGGTTTTAGAGG  
AAATAGTCAAACATGAACTAGGAAGCCAGGTGAGTCTCCTTCTCCAGTGGAAGAGCCGGGACCTTCCCCCTGCA  
CCCCGACATCCAGGGACGGGGTGTGAGGAAGACGCTGCCCTCCCAATGGCCTGGACGGGATGTTTCCAAGCTCTT  
GTTCCCTTAACGTCTCAACAGGCGCTCACTGAAGTGTATGAATATTTTTTAAAAAGGTTTTTGCAGTAAGCTAGT  
CTTCCCTCTGCTTTCTCGAAAGCTTACTGAGCCCCGGGCCCAAGCACGGGCCGGGCATAGATTTCTCTTCCA  
CAAGCTGCCGCTTTTCTGGGCACCTTGAAGCATCAGGGCGTGAAATCAAACCTAGATGTGGGCAGGGAGAGGGTTG  
CTTACCTGCCCTGCTGGGGCAGGGTTTCTGAAACTGGGTTAATTCTTTATAGAAATGTGAACACTGAATTTATT  
TTAAAAATAATAATAAAATTTAAAAAATTAAAAATA

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**FIGURE 3846**

MALYYQNFYILVVFVLFHTSRFTVLPVHAVKDSAQVLEEIVKHELGSQVSLSPVEEPGPSPCTPDIQGRGVRK  
TLPPNGLDGMFPSSCSPNVSTGAH

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**FIGURE 3847**

CTGGCTTCGGCCTCAGCCCCACCATGGTGACGCTTGCTGAACTGCTGGTGCTCCTGGCCGCTCTCCTGGCCACGG  
TCTCGGGCTATTTTCGTTAGCATCGACGCCCATGCTGAAGAGTGCTTCTTTGAGCGGGTCACCTCGGGCACCAAGA  
TGGGCCTCATCTTCGAGGTGGCGGAGGGCGGCTTCTGGACATCGACGTGGAGATTACAGGACCAGATAACAAAG  
GAATTTACAAAGGAGACAGAGAATCCAGTGGGAAATACACATTGCTGCTCAGATGGATGGAACATACAAATTTT  
GTTTTAGTAACCGGATGTCCACCATGACTCCAAAAATAGTGATGTTTACCATTGATATTGGGGAGGCTCCAAAAG  
GACAAGATATGGAAACAGAAGCTCACCAGAACAAGCTAGAAGAAATGATCAATGAGCTAGCAGTGGCGATGACAG  
CTGTAAAGCACGAACAGGAATACATGGAAGTCCGGGAGAGAATACACAGAGCCATCAACGACAACACAAACAGCA  
GAGTGGTCTTTGGTCTCTCTTTGAAGCTCTTGTCTAGTTGCCATGACATTGGGACAGATCTACTACCTGAAGA  
GATTTTTTGAAGTCCGGAGAGTTGTTTAAAAAGCCTCTTCTGATGATCCCACTCAGAATTCAGTTTACCAA  
ACACCTTGGTCATAATAATGTCATTAGTTTCTCCATTTTTATTTTCTGAACTGTACATTACAACTTATGTTTCT  
TTGAGATTAATAGATATTGGGGGAAAAACGCCCTTTTAGGAAAATTATAGTGAATAATTGACAGTTGATTGGCAT  
AATTTCTTGTGTAATGCTGCCTCCATTATATAGGTCTTCCAGGAACCTCAAACACTGTAAGTGAATATGGGAG  
TATAGTTTTTATTATTTCTTCTTTTCTTTTGTTCATAATATAATGCAGTTTGTTCAGGAAATCAGCACAAAG  
CCTGATAGTACTTTACTAAATGACTGCATTCTTTGGATTCTTCAGTCTATGGTTCAGTCACTAAAGATTCAT  
TTTTGTTGAGTCTTATGAGAAACAGCAGTATGAATCTTGACGGTTTCTGCCCCGTCCTAATGGCAGAGCTCTCTG  
ACTTGGGTGTATGCTGCCAGGCTGGGTACTTTTCTACTTTGTTTTCTGTTTTGCTTTTAAACTACGACTCAGCA  
TACATTTTCCACATACATTTTACATTGTACCTTAGGACTCAGTCATCTCCACTTAAATTGATGACACAAGCAG  
CTAATAACCATTCTGGGTTTCTGCCTAACCCCTAATTGTCTGTGTTAAAGCCAATTCTCTGGGTGTCCAGTGAG  
TGGTGGCTTTTTTCTTTCCACATTGGCACATTCACTTCTCCACTCTTGGCATGTAAGAAATAAGCATTATACAT  
AATTGGAAAAATCTGGATTTCTGATGCCAAAGGGTTAAAGCTTCTTGATTTTCAATTTATTGATATACAGCCACT  
ATTTTATTTTTGATCAGTGGCCTTTGGGCCACTGTTTCAAGGTACTGACCATCAGTGTGAGCATTAGGGTTTTGGT  
TTTTGTTTCTTTTGGGTATTTCTTTTTTGGCACATGTGAATCTTGTGTTTGTGTAATAATGAAATTACTTTCTCTG  
TTCTCTGATGATGGGTTTAAATTAAGAGCATCCGGTTTGGTATGGGGATGATCCAGGATTATGTTGTGACT  
GATACATATTAGTTACTTGTGCTTTTTTTTTTTTTTTTGGATCTTTGCAAGGGCAAACTACAAGTAACGAGTT  
TTATATAATTAATTTAAATTTGTTACAGGTTTTTATGTTTCAAGATAAACCATACTTCCACCTTGGGTGAGAACAC  
TTGCAACAGTTTATTAATGAGGTGACTTTACCTTAGGACAACCTGTTGCATGCCAAGTTTTTTGTGTGTGTGAAA  
CACTTCAAACTGATTTAAAGATGTAAATTTAAATTGGTTGTATCTAATATGCCCCAGGTTCCGGTAAATAAAC  
AATCTTTTTTAAAAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 3848**

MVTLAELLVLLAALLATVSGYFVSDAHAECCFFERVTSGTKMGLIFEVAEGGFLDIDVEITGPDNKG IYKGDRE  
SSGKYTFAAHMDGTYKFCFSNRMSTMTPKIVMFTIDIGEAPKGQDMETEAHQNKLEEMINELAVAMTAVKHEQEY  
MEVRERIHRANDNTNSRVVLWSFFEALVLVAMTLGQIYYLKREFEVRRVV

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**FIGURE 3849**

ATCTGCGGAAGTGGAGTGC GGGGAGTGC GCCGGAAGAGGGGTACGGAAGTGC GCCGGAAGTGGGGTGC GGAGGTG  
TGCAGCGCGCTGTCAGACTGGCTCGCAGGCGGCGCGGCCGGCGGACCCGTTTCGAGACAGCGCGGGCGGCTCGGGT  
CCCCTGGGGCTCCGCAGCAGGAGGACGCCATGGACGACAAGGAGTTAATTGAATACTTTAAGTCTCAGATGAAA  
AAGATCCTGACATGGCCTCAGCAGTGGCTGCCATCCGGACGTTGCTGGAGTTCTTGAAGAGAGATAAAGGGGAGA  
CAATCCAGGGTCTGAGGGCGAATCTCACCAGTGCCATAGAAACCCTGTGTGGTGTGGACTCCTCTGTGGCAGTGT  
CCTCTGGCGGGGAGCTCTTCCTCCGCTTCATCAGTCTTGCCCTCCCTGGAATACTCCGATTACTCCAAATGTAAAA  
AGATCATGATTGAGCGGGGAGAACTTTTTCTCAGGAGATAATCACTGTCAAGAAACAAAATTGCAGATCTGTGCC  
ATACTTTCATCAAAGATGGAGCGACAATATTGACTCACGCCTACTCCAGAGTGGTCTGAGAGTCTGGAAGCAG  
CCGTGGCGGCCAAGAAGCGATTTAGTGTATACGTCACAGAGTCACAGCCTGATTGTGTCAGGTAAGAAAATGGCCA  
AAGCCCTCTGCCACCTCAACGTCCTGTCACTGTGGTGTAGATGCTGCTGTCGGCTACATCATGGAGAAAGCAG  
ATCTTGTATAGTTGGTGTGAAGGAGTTGTTGAAAACGGAGGAATTATTAACAAGATTGGAACCAACCAGATGG  
CTGTGTGTGCCAAAGCACAGAACAAACCTTTCTATGTGGTTGCAGAAAGTTTCAAGTTTGTCCGGCTCTTTCCAC  
TAAACCAGCAAGACGTCCCAGATAAGTTTAAGTATAAGGCAGACACTCTCAAGGTCGCGCAGACTGGACAAGACC  
TCAAAGAGGAGCATCCGTGGGTGCGACTACACTGCCCCCTTCCTTAATCACTCTGCTGTTTACAGACCTGGCGGTGC  
TGACACCCCTCAGCAGTCAGCGATGAGCTCATCAAGCTCTATCTGTAACCTGTGAGCCCTTTCTGCCAAGGTGCA  
GCTTACGTAGTTGAGGCAGGGTGAGTAGCTGCTTGACACCCAGTGAGTCAGGCCAAAACCTGAGATGTGTTTAA  
GAAGATTTATGGAGTAAGGACTTAAATCATACATCTTGAGAACCTTTCTTACTCATTTTCAGTCCCATCTAAAA  
ATGTGTCAGCTATTCTAAATCCCAACTTAAATTGTTCTTACGGTTTCTAGAACTTTCTTTTCAGTTTCCAGAA  
ATACAAGTTAGATAATTGGCTACTTAACTGATGAAAGATGAGCCCAAGTCCACCTGTCTTCATCCTCCCTGCAC  
TCCAGACTGATCTGCCATAAGCAGCGGAGATGCAGGCGAAAAGCAGCCACACCCCTCTGCCACAAATGACCAACA  
GCTGGTCAGGACGTTACACGCGGTGCCTTGTAAGAGGCAAGAAACACTTGCTGAATCTGCATCTGGCTTCCAGTG  
GTAAGCACATTCTCAGCAGGATCAAGCCAAACAGTAAAACTACCAAGAGAACACGAGGAAGGCAGAAACGATG  
TTTAGCAACAGTATTCTGCATGGTTCACTGCTTAAGAAAATGCCTTCTGGAATATTTGTAACTGAAATTCTGTA  
TGTGTAAGAGATGTTTAAATATGTTTGGGTCCTAAACAGCTTTTAAATTTATACTTGGGAATAAATTCAGCATC  
TTTTCAAATAAACTCTATGAAAGAC

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**FIGURE 3850**

MDDKELIEYFKSQMKEDPDMASAVAAIRTLLEFLKRDKGETIQGLRANLTSAIETLCGVDSSVAVSSGGELFLRF  
ISLASLEYSKCKKIMIERGELFLRRISLSRNKIADLCHTFIKDGATILTHAYSRVLRVLEAAVAACKRFSV  
YVTESQPDLSGKKMAKALCHLNVPVTVVLDAAVGYIMEKADLVIVGAEGVVENGGIINKIGTNQMAVCAKAQNK  
FYVVAESFKFVRLFPLNQDVPDKFKYKADTLKVAQTGQDLKEEHPWVDYTAPSLITLLFTDLGVLTSAVSDEL  
IKLYL

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**FIGURE 3851**

GTGAGTGGCTTCCACAGGCCATGCACCCGATATCGAGAAAGCCTGGCCCCCACCCTGTCCACTGACCAGAAA  
CCTGGCTGCAGGGCCGAGGACTGGTTTGGGGACTGGAGGGCTGGCAGCAGCCTGTCACCGTGCGACCGTGACCAC  
CTGGCATGGGCTTCGTGGCCTGCTCTCAGGAAGTGGGTCAAGCCCTGGGAACCCTCATCCATGAGAGCTCGATCC  
CGTATGAAGGGTGCTGCCGCCCGTGCCATCTGGCCCGGGGGTGACTTTTTTGAAGTGTATTATATGGTGGATGA  
TGATTTTCATCTCACGTGCTGGACGCTGTTCTGTTTCAGTGTGCTCTTTGGACTACATTAGTCCCCTGTGGAGCAGC  
AGGGCTGGAGATCTCTGCAGTCCCTTCCCCGCCCGCCCTGCCAGAAGGCCGAGGAGGCACGTGGAGGGCCTCCTT  
CCTGCAATTCTTCCCTCTCCAGAGTCAGGGAGGGCTGCCAGCCCTGGCCTCACAGCCGTCCCAGATGTTAGGTG  
AGCCACTGAGCTCTGTGTTGACCTTGAGGGGCCTGGCTGGGGGCCCCCAGGCTCCATGCCTTCTTGGGAGGGTGG  
CCGCCAACGCCTTTCTGTGTTATGGCAACAGGGAGTGGGCATCTCATCTGCCTGTGGTCAGCTCTCAGACGGCA  
GGGAGCGGAGCTGACGTTGGCTGTGCTTGGTCACCGCTGCCATGCCGCAGAGGATGCGCCTAGCTGGGCTGGGGC  
CACACGACTATTATGTTGCCCTTGAACGGGGACTGCAGAGCCCTCAGTTTGTCTCCCTTGTTCCCTCTGTGGCTGA  
GGTGGGAGGGGGAGGGTGGGGTAGGTCCCCCAGCAAGAAAGAGGGACAGGAGCACCCCAGGCAGGACCAAGGAGT  
CGGGAGGCCCCCTGCCTTCTGTCTCCATGGTGAGGGCACAGATGTCTCCCCAGAGCCCAGCGCTGGCAGAATGGA  
TTCTGCTCCTGGCTTTGCTTCTGCGGCTTCGGTGGAGACAGTTATGGAATAAAATGTTCTTGCAAAAAAAAAA  
AAAAAA

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**FIGURE 3852**

MGFVACSQEVGQALGTLIHESSIPYEGCCRPCHLARG

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**FIGURE 3853**

AGTTCGCTCGCAGCCGGGATTGGGTGCGGGTTCTTGTTTGTGGATCGCTGTGATCGTCACTTGGTGAGTAGCGG  
GCTGCTGGGCTGGCCGGGGCTTTCGTGGCCGCCGGGCCGCTCGGTGGGACGGAAGCGTGTGGAGAGACCGCCAAG  
GGCTGTAGTCTGGGTCCGCGAGCAAGGTTGCCCTGAACTGGGGGTGGGGGGAGCGCAGCAAAATGGCGGCTGTT  
CCCGAGTCTTGAATGGAAGACGCTTGTGAGGCGGGCTGTGAGGTCGTTGAAACAAGGTGGGGGGCATGGTGGGCG  
GCAAGAACCCAAGGTCTTGAAGCCTTCGCTAATGCGGGAAAGCTCTTATTCGGGTGAGATGGGCTGGGGCACCAT  
CTGGGGACCCTGACGTGAAGTTTGTCACTGACTGGAGAACTCGGTTTGTCTGTGTTGCGGGGGCGGCAGTTATG  
GCGGTGCCGTGGGCAGTGACCCGTACCTTTGGGAGCGCGCGCCCTCGTCGTGTCTGTGACGTACCCGTTCTGT  
TGGCTTATAATGCAGGGTGGGGCCACCTGCCGGTAGGTGTGCGGTAGGCTTTTCTCCGTCGCAGGACGCAGGGT  
CGGGCCTAGGGTAGGCTCTCCTGAATCGACAGGCGCCGGACCTCTGGTGAGGGGAGGGATAAGTGAGGCGTCAGT  
TTCTTTGGTCGGTTTATGTACCTATCTTCTTAAGTAGCTGAAGCTCCGGTTTTGAAGTATCGGCTCGGGGTGG  
CGAGTGTGTTTTGTGAAGTTTTTTAGGCACCTTTTGAATGTAATCATTGGGTCAATATGTAATTTTCAAGTGT  
AGACTAGTAAATTGTCCGCTAAATCTGGCCGTTTTTGGCTTTTTTGTAGACAATGCAGATCTTCGTGAAGACT  
CTGACTGGTAAGACCATCACCTCGAGGTTGAGCCCAGTGACACCATCGAGAATGTCAAGGCAAAGATCCAAGAT  
AAGGAAGGCATCCCTCTGACCAGCAGAGGCTGATCTTGTGGAACACAGCTGGAAGATGGGCGCACCTGTCT  
GACTACAACATCCAGAAAGAGTCCACCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGCAAAATCTTCGTGAAG  
ACACTCACTGGCAAGACCATCACCTTGAGGTGGAGCCAGTGACACCATCGAGAACGTCAAAGCAAAGATCCAG  
GACAAGGAAGGCATTCTCCTGACCAGCAGAGGTTGATCTTTGCCGGAAGCAGCTGGAAGATGGGCGCACCTGT  
TCTGACTACAACATCCAGAAAGAGTCTACCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGCAGATCTTCGTG  
AAGACCCTGACTGGTAAGACCATCACCTCGAGGTGGAGCCAGTGACACCATCGAGAATGTCAAGGCAAAGATC  
CAAGATAAGGAAGGCATTCTCCTGATCAGCAGAGGTTGATCTTTGCCGGAACAGCTGGAAGATGGTTCGTACC  
CTGTCTGACTACAACATCCAGAAAGAGTCCACCTTGACCTGGTACTCCGTCTCAGAGGTGGGATGCAAAATCTTC  
GTGAAGACACTCACTGGCAAGACCATCACCTTGAGGTGAGCCAGTGACACTATCGAGAACGTCAAAGCAAAG  
ATCCAAGACAAGGAAGGCATTCTCCTGACCAGCAGAGGTTGATCTTTGCCGGAAGCAGCTGGAAGATGGGCGC  
ACCTGTCTGACTACAACATCCAGAAAGAGTCTACCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGCAGATC  
TTCGTGAAGACCCTGACTGGTAAGACCATCACCTCGAAGTGGAGCCGAGTGACACCATTGAGAATGTCAAGGCA  
AAGATCCAAGACAAGGAAGGCATCCCTCTGACCAGCAGAGGTTGATCTTTGCCGGAACAGCTGGAAGATGGT  
CGTACCCTGTCTGACTACAACATCCAGAAAGAGTCCACCTTGACCTGGTGCTCCGTCTCAGAGGTGGGATGCAG  
ATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAGGTGGAGCCGAGTGACACCATTGAGAATGTCAAG  
GCAAAGATCCAAGACAAGGAAGGCATCCCTCTGATCAGCAGAGGTTGATCTTTGCTGGGAAACAGCTGGAAGAT  
GGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACCTGCACCTGGTGCTCCGTCTTAGAGGTGGGATG  
CAGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAATGTC  
AAGGCAAAGATCCAAGACAAGGAAGGCATCCCTCTGACCAGCAGAGGTTGATCTTTGCTGGGAAACAGCTGGAA  
GATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACCTGCACCTGGTGCTCCGTCTTAGAGGTGGG  
ATGCAGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAAT  
GTCAAGGCAAAGATCCAAGACAAGGAAGGCATCCCTCTGACCAGCAGAGGTTGATCTTTGCTGGGAAACAGCTG  
GAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACCTGCACCTGGTGCTCCGTCTCAGAGGT  
GGGATGCAGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACCTCGAGGTGGAGCCGAGTGACACCATCGAG  
AATGTCAAGGCAAAGATCCAAGATAAGGAAGGCATCCCTCTGATCAGCAGAGGTTGATCTTTGCTGGGAAACAG  
CTGGAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACTCTGCACCTTGGTCTGCGCTTGAGG  
GGGGGTGTCTAAGTTTTCCCTTTTAAAGTTTCAACAAATTTTATTGCACTTTCTTTCAATAAAGTTGTTGCATT  
CCCAATTGGTGTTTTTTTTTTTTTTTTTTTTTTTTTAAAGTTTATTTGCATT

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**FIGURE 3854**

MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTLHLVLR LRG  
GMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTLHLVLR LRL  
GGMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTLHLVLR L  
RGGMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTLHLVLR L  
RLRGGMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTLHLV L  
LRLRGGMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTLHL L  
VLRRLRGGMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTLH L  
LVLRLRGGMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQR LIFAGKQLEDGRTLSDYNIQKESTL H  
HLVLRRLGGV

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**FIGURE 3855**

GGAAGATGGTCGTACCCCTGTCTGACTACAACATCCAGAAAGAGTCCACCTTGCACCTGGTGCTCCGTCTCAGAGG  
TGGGATGCAGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAGGTGGAGCCGAGTGACACCATTGA  
GAATGTCAAGGCAAAGATCCAAGACAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGAAACA  
GCTGGAAGATGGACGCACCCCTGTCTGACTACAACATCCAGAAAGAGTCCACCCCTGCACCTGGTGCTCCGTCTTAG  
AGGTGGGATGCAGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCAT  
TGAGAATGTCAAGGCAAAGATCCAAGACCCTGACTGGTAAGACCATCACT



**FIGURE 3856A**

[illegible]

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**FIGURE 3856B**

GGGCTCAGTTCGGGGCGGAAGCATCACCAAAGGCATTCCCAGCACACGGGTGCCCTCGGACAGCGCCATCACATA  
CCGCGGCTCCATACCCACGGCACGCCAGCTGACGTCCTGTACAAGGGCACCATCACCAGGATCATCGGCGAGGA  
CAGCCCCAGTCGCTTGACC GCGCCGGGAGGACAGCCTGCCAAGGGCCACGTCATCTACGAAGGCAAGAAGGG  
CCACGTCCTTGCTATGAGGGTGCGATGTCTGTGACCCAGTGCTCCAAGGAGGACGGCAGAAGCAGCTCAGGACC  
CCCCCATGAGACGGCCGCCCCCAAGCGCACCTATGACATGATGGAGGGCCGCGTGGGCAGAGCCATCTCCTCAGC  
CAGCATCGAAGGTCTCATGGGCCGTGCCATCCCGCCGGAGCGACACAGCCCCACCACCTCAAAGAGCAGCACCA  
CATCCGCGGGTCCATCACACAAGGGATCCCTCGGTCTACGTGGAGGCACAGGAGGACTACCTGCGTCGGGAGGC  
CAAGCTCTTAAAGCGGGAGGGCACGCTCCGCCCCACC GCCCTCACGGGACCTGACCAGGGCCTACAAGACGCA  
GGCCCTGGGCCCCCTGAAGCTGAAGCCGGCCCATGAGGGCCTGGTGCCACGGTGAAGGAGGCGGGCCGCTCCAT  
CCATGAGATCCCGCGGAGGAGCTGCGGCACACGCCGAGCTGCCCTGGCCCCGCGCCGCTCAAGGAGGGCTC  
CATCACGCAGGGCACCCCGCTCAAGTACGACACCGCGCGCTCCACCCTGGCTCCAAAAGCAGCAGCTACGCTC  
CCTCATCGGCAGCCCCGGCCGGACGTTCACCCCGTGACCCGCTGGATGTGATGGCCGACGCCCGGGCACTGGA  
ACGTGCCTGTACGAGGAGAGCCTGAAGAGCCGGCCAGGGACCGCCAGCAGCTCGGGGGGCTCCATTGCGCGCGG  
CGCCCCGGTCATTGTGCTGAGCTGGGTAAGCCGCGGCAGAGCCCCCTGACCTATGAGGACCACGGGGCACCCCTT  
TGCCGGCCACCTCCACGAGGTTGCGCCGTGACCACGCGGGAGCCACGCCGCGCTGCAGGAGGGCAGCCTTTC  
GTCCAGCAAGGCATCCCAGGACCGAAAGCTGACGTGACGCCTCGTGAGATCGCCAAGTCCCCGCACAGCACCGT  
GCCCCAGCACCACCCACACCCCATCTCGCCCTATGAGCACCTGCTTCGGGGCGTGAGTGGCGTGGACCTGTATCG  
CAGCCACATCCCCCTGGCCCTTCGACCCACCTCCATACCCCGCGGCATCCCTCTGGACGCAGCCGCTGCCTACTA  
CCTGCCCCGACACCTGGCCCCCAACCCACCTACCCGCACCTGTACCCACCTACCTCATCCGCGGCTACCCCGA  
CACGCGGGCGCTGGAGAACCGGCAGACCATCATCAATGACTACATCACCTCGCAGCAGATGCACCACAACGCGGC  
CACCGCCATGGCCACGCGAGCTGATATGCTGAGGGGCTCTCGCCCCGCGAGTCTCGTGGCACTCAACTACGC  
TGCGGGTCCCCGAGGCATCATCGACCTGTCCCAAGTGCCACACCTGCCTGTGCTCGTGCCTCGACACAGGCAC  
CCCAGCCACCGCCATGGACCGCTTGCTACCTCCCCACCGCGCCCCAGCCCTTCAGCAGCCGCCACAGCAGCTC  
CCCCTCTCCCCAGGAGGTCCAACACACTTGACAAAACCAACCACCACGTCTCTCGTCCGAGCGGGAGCGAGACCG  
GGATCGAGAGCGGGACCGGGATCGGGAGCGGGAAAAGTCCATCCTCACGTCCACCACGAGGTGGAGCACGCACC  
CATCTGGAGACCTGGTACAGAGCAGAGCAGCGGCAGCAGCGCGGGGGTGGGGGCAGCAGCAGCCGCCCGCCCTC  
CCACTCCCATGCCACCAGCACTCGCCCATCTCCCTCGGACCCAGGATGCCCTCCAGCAGAGACCCAGTGTGCT  
TCACAACACAGGCATGAAGGGTATCATCACCGCTGTGGAGCCACGACGCCACGGTCTGAGGTCCACCTCCAC  
CTCCTCACCCGTTTCGCCGGCTGCCACATTCCACCTGCCACCACTGCCCACTGGGCGGCACCCCTCGATGGGGT  
CTACCTACCTCATGGAGCCCGTCTTGCTGCCAAGGAGGCCCGGGTGCCTCGGGCCAGAGCGGCCCGGAGC  
AGACACCGGCCATGCCTTCCTCGCCAAGCCCCAGCCCGCTCCGGGTGGAGCCCGCTCTCCCCAGCAAGGG  
CTCGGAGCCCCGGCCCCTAGTGCTCTGTCTGTGCGCACGCCACCATCGCCCGACCCCTGCGAAGAACCTCGC  
ACCTCACACGCCAGCCCGGACCCGCGCGGCCACCTGCCTCGGCCTCGGACCCGCACCGGGAAAAGACTCAAAG  
TAAACCTTTTTCATCCAGGAAGTGAAGTCCGTTCTCTGGGTACCACGGCAGCAGCTACAGCCCCGAAGGGGT  
GGAGCCCGTCAGCCCTGTGAGCTCACCCAGTCTGACCCACGACAAGGGGCTCCCAAGCACCTGGAAGAGCTCGA  
CAAGAGCCACCTGGAGGGGGAGCTGCGGCCAAGCAGCCAGGCCCGTGAAGCTTGGCGGGGAGGCCGCCACCT  
CCCACACCTGCGGCCGCTGCCTGAGAGCCAGCCCTCGTCCAGCCCGCTGCTCCAGACCGCCAGGGGTCAAAGG  
TCACCAGCGGGTGGTACCCCTGGCCAGCACATCAGTGAGGTATCACACAGGACTACACCCGGCACCACCCACA  
GCAGCTCAGCGCACCCCTGCCCGCCCCCTTACTCCTTCCTGGGGCCAGTGCCCCGTCCTGGACCTCCGCCG  
CCCACCCAGTGACCTTACCTCCCGCCCCCGACCATGGTGCCCCGGCCCGTGGCTCCCCCCCCACAGCGAAGGGG  
CAAGAGGTCTCCAGAGCCAAACAAGACGTCCGTCTTGGGTGGTGGTGAGGACGGTATTGAACCTGTGTCCCCACC  
GGAGGGCATGACGGAGCCAGGGCACTCCCGGAGTGCTGTGTACCCGCTGCTGTACCGGGATGGGGAACAGACGGA  
GCCCAGCAGGATGGGCTCCAAGTCTCCAGGCAACACCAGCCAGCCGCCAGCCTTCTTCAGCAAGCTGACCGAGAG  
CAACTCCGCCATGGTCAAGTCCAAGAAGCAAGAGATCAACAAGAAGCTGAACACCCACAACCGGAATGAGCCTGA  
ATACAATATCAGCCAGCCTGGGACGGAGATCTTAATATGCCCGCCATCACCGGACAGGCCTTATGACCTATAG  
AAGCCAGGCGGTGCAGGAACATGCCAGCACCAACATGGGGCTGGAGGCCATAATTAGAAAGGCACTCATGGGTAA  
ATATGACCAGTGGGAAGAGTCCCCGCGCTCAGCGCCAATGCTTTAACCCTCTGAATGCCAGTGCCAGCCTGCC  
CGCTGCTATGCCATAACCGCTGCTGACGGACGGAGTGACCACACACTCACCTCGCCAGGTGGCGGCGGGGAAGGC

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**FIGURE 3856C**

CAAGGTCTCTGGCAGACCCAGCAGCCGAAAAGCCAAGTCCCCGGCCCCGGGCCTGGCATCTGGGGACCGGCCACC  
CTCTGTCTCCTCAGTGCACTCGGAGGGAGACTGCAACCGCCGGACGCCGCTCACCACCGCGTGTGGGAGGACAG  
GCCCTCGTCCGCGAGGTTCCACGCCATTCCCCTACAACCCCTGATCATGCGGCTGCAGGCGGGTGTTCATGGCTTC  
CCCACCCCCACCGGGCCTCCCGCGGGCAGCGGGCCCTCGCTGGCCCCACCACGCCCTGGGACGAGGAGCCCAA  
GCCACTGCTCTGCTCGCAGTACGAGACACTCTCCGACAGCGAGTGAAGTCAAGACAGGGCGGGGGGGGGGGCGGTG  
TCAGGTCCCAGCGAGCCACAGGAACGGCCCTGCAGGAGCAGGGCGGGTGCCTGACTCCCCAACCAAGGAAGGAGC  
CCCTGAGTCCGCTGCGCCTCCATCCATCTGTCCGTCCAGAGCCGGCATCCTTGCCTGTCTAAAGCCTTAACTAA  
GACTCCCGCCCCGGGCTGGCCCTGTGCAGACCTTACTCAGGGGATGTTTACCTGGTGTCTCGGGAAGGGAGGGGAA  
GGGGCCGGGAGGGGGCACGGCAGGCGTGTGGCAGCCACACGCAGGCGGCCAGGGCGGCCAGGGACCCAAAGCAG  
GATGACCACGCACCTCCACGCCACTGCCTCCCCGAATGCATTTGGAACCAAAGTCTAAACTGAGCTCGCAGCCC  
CCGCGCCCTCCCTCCGCCTCCCATCCCGCTTAGCGCTCTGGACAGATGGACGCAGGCCCTGTCCAGCCCCCAGTG  
CGCTCGTTCCGGTCCCCACAGACTGCCCCAGCCAACGAGATTGCTGGAACCAAAGTCAGGCCAGGTGGGCGGACA  
AAAGGGCCAGGTGCGGCCTGGGGGGAACGGATGCTCCGAGGACTGGACTGTTTTTTCACACATCGTTGCCGCAG  
CGGTGGGAAGGAAAGGCAGATGTAAATGATGTGTTGGTTTACAGGGTATATTTTGTATACCTTCAATGAATTAAT  
TCAGATGTTTTACGCAAGGAAGGACTTACCCAGTATTACTGCTGCTGTGCTTTTGATCTCTGCTTACCGTTCAAG  
AGGCCTGTGCAGGCCGACAGTCGGTGACCCCATCACTCGCAGGACCAAGGGGGCGGGGACTGCTGGCTCACGCCC  
CGCTGTGTCCTCCCTCCCTCCCTTCCCTTGGGCAGAATGAATTCGATGCGTATTCTGTGGCCGCCATCTGCGCAGG  
GTGGTGGTATTCTGTCAATTACACACGTCGTTCTAATTAAGGAATTATACTCCA

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**FIGURE 3857**

TCGGACGGGCGCGGAGACGCTTCTGGAAGGAACGCCGCGATGGCTGCGCAGGGAGAGCCCCAGGTCCAGTTCAAA  
CTTGTATTGGTTGGTGATGGTGGTACTGGAAAAACGACCTTCGTGAAACGTCATTTGACTGGTGAATTTGAGAAG  
AAGTATGTAGCCACCTTGGGTGTTGAGGTTTCATCCCCTAGTGTTCCACACCAACAGAGGACCTATTAAGTTCAAT  
GTATGGGACACAGCCGCCAGGAGAAATTCGGTGGACTGAGAGATGGCTATTATATCCAAGCCCAGTGTGCCATC  
ATAATGTTTGATGTAACATCGAGAGTTACTTACAAGAATGTGCCTAACTGGCATAGAGATCTGGTACGAGTGTGT  
GAAAACATCCCCATTGTGTTGTGTGGCAACAAAGTGGATATTAAGGACAGGAAAGTGAAGGCGAAATCCATTGTC  
TTCCACCGAAAGAAGAATCTTCAGTACTACGACATTTCTGCCAAAAGTAACTACAACCTTTGAAAAGCCCTTCCTC  
TGGCTTGCTAGGAAGCTCATTGGAGACCCTAAGTTGGAATTTGTTGCCATGCCTGCTCTCCCGGATGAGGATGAT  
GACCTGTGAGAATGAAGCTGGAGCCCAGCGTCAGAAGTCTAGTTTTATAGGCAGCTGTCCGTGTATGTCAGCGGT  
GCAGCGTGTGTGCCACCTCATTATTATCTA

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**FIGURE 3858**

MAAQGPQVQFKLVLVGDGGTGKTTFVKHHLTGEFEKKYVATLGVEVHPLVFHTNRGPVKFNVWDTAGLEKFSGL  
RDGYIIQAQSTIIIVFDVTSRVITYKNVPNWHRDLV

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**FIGURE 3859A**

CTTGAAATGACCCGCCACACCTGAAGCCTGCAGGTGCTGAGGCCACATTCGATCAGACCCAAGCTTTGGGAGAC  
CGCTGGGGAAATTTCCCACTTCTCTCTCTGAGACCAGGAAGCTCAGCAGAGAACTTTGTGGAATGAAGTGAAG  
GATGCCACCCAGGGAGAGTATCTCTGAGATCCCATCATGCAGGCCTTCCACAAGGGCCCGGCAGCATGACAAG  
GTGAAGGCAGAGTATGTGCATCTCAACCATCCGCTCACCCCTCGTGACCAGAGAGCGCGATTGGCCGTGAAGGAG  
AAACACCAGCTCCAAGCCAAGCTGGAGAACCTAGAACAGGTCCTGAAGCATATGCGAGAGGCGGCTGAACGGCGG  
CAGCAGCTGCAGTTGGAGCATGACCAGGCCCTGGCTGTTCTCAGTGCCAAGCAGCAGGAAATTGACCTTCTGCAG  
AAGTCCAAGGTTGAGAGCTGGAAGAGAAATGCCGGAAGCTCAAAGTGAGCAGTTCAACCTGCTGTCCCGGACCTG  
GAGAAGTTCCGGCAGCACGCTGGCAAGATTGACCTGTGGGTGGCAGCGCGGTGGCCCCCTGGACATCTCCACG  
GCCCCCAGCAAGCCTTTCCACAGTTTCATGAATGGCTAGCCACCTCCCTCGGCAAAGGTCAGGAGAGCGCTATT  
GGAGGCAGCTCTGCGATCGGTGAATATATCCGGCCCCCTCCGCAGCCTGGTGACAGGCCGAGCCTCTGTCCGCC  
AAGCCCACCTTCTGTGCGATCCGCTAGCGCAAGATGCAGATCTGAGTCAGACATGGAGAATGAACGGAATTCC  
AATACCTCCAAGCAGAGATACTCGGGGAAGGTCCACCTCTGTGTTGCCCGCTATAGTTACAACCCCTTCGATGGA  
CCGAACGAGAACCCGAAGCTGAGCTGCCCCCTCACGGCGGGAAATACCTCTACGTCTATGGAGACATGGATGAG  
GATGGGTTCTATGAAGGAGAGCTCCTCGATGGCCAGAGGGGTCTGGTGCCCTCCAACCTTCGTGGACTTTGTGCAG  
GACAACGAGTCGCGGTTGGCAAGCACGCTGGGGAACGAGCAGGATCAGAACTTCATCAACCATCCGGCATCGGC  
CTGGAGGGAGAGCACATCCTGGACCTCCACTCCCCAACCCACATAGATGCGGGCATCACCGACAACAGTGCCGGG  
ACCCTGGACGTGAACATCGACGACATCGGAGAAGACATCGTGCCCTTACCCTAGAAAAATCACCTCATCAAACAA  
CTCGCCAAAAGTGTTATTGTGGGCTGGGAGCCCCCGCGGTGCCACCAGGATGGGGAACGGTGAGCAGCTACAAC  
GTCTTGGTGGACAAGGAGACACGCATGAACCTCACGCTGGGGAGCAGAACTAAAGCCCTCATCGAGAAGCTCAAC  
ATGGCAGCCTGCACCTACCGCATCTCCGTGCAGTGCGTCACCAGCAGGGGCAGCTCGGATGAGCTGCAGTGACG  
CTGCTGGTGGGCAAGGACGTGGTGGTGGCCCCCTCCACCTGCGGGTGGACAACATCACGCAGATCTCCGCCAG  
CTCTCTGGCTACCCACCAACAGCAACTACAGCCACGTCTCTTCTCAACGAGGAGGAGTTCGACATCGTCAAG  
GCCGCCAGGTACAAGTACCAGTTCTTCAATCTCAGGCCCAACATGGCCTATAAGGTGAAGGTTCTGGCCAAACCC  
CACCAGATGCCGTGGCAGCTCCCGCTGGAGCAAAGGGAGAAGAGGAGGCCCTTGTGGAGTTCTCCACGTGCTC  
GCAGGACCCCCAGCACCCCCACAAGATGTTACCGTCCAGGCTGGGGTGACCCCCGCCACCATCCGGGTCTCCTGG  
AGACCACCTGTGCTGACGCCCCACCGGCTGTCCAATGGCGCAAACGTTACCGGCTACGGCGTGTATGCCAAAGGG  
CAGAGGGTGGCTGAAGTCATCTTCCCCACGGCAGACAGCACGGCCGTGGAGCTTGTGCGGTGCGGAGCCTGGAG  
GCCAAGGGCGTGACCGTGCGGACCTCTCCGCCCAGGGCAGTCCGTGGACTCTGCAGTTGCTGCCGTTCACCCC  
GAGCTCCTGGTGCCTCTACCCCCACCCGAGACCTGCACCCCAATCAAAGCCATTAGCAAGTTCTGGAGTCCCC  
GAAACCAAAGACGAGCACCTGGGTCCCCACGCCAGGATGGATGAGGCTGGGAGCAGAGCCGTGCACCTGGCCCT  
GTGCATGGGCACATGCTGGAGCCGCCGTGGGCCCCGGAAGGCGGTGCCCCACCCAGCCGCATCCTGCCACAG  
CCACAGGGCACCCCGGTGTCCACCACCGTCGCCAAGGCCATGGCCCCGAGGCCGCGCAGAGGGTGGCCGAGAGC  
AGCAGGTTAGAGAAAAGGAGCGTCTTCTAGAGAGAAGCAGCGCGGGCAGTACGCCGCTCAGACGAGGAGGAC  
GCCTATGACTCTCCAGACTTCAAGAGGAGGGGCGCCTCGGTGGACGACTTCTGAAAGGCTCTGAACCTGGCAAG  
CAGCCGCACTGTTGCCATGGAGACGAGTACCACACAGAGAGCAGCCGGGGGTCTGACCTCTCAGACATCATGGAG  
GAGGACGAGGAGGAGCTGTATTCTGAAATGCAGCTGGAAGATGGGGGAAGGAGGCGGCCAGCGGCACGTCCAC  
AATGCCCTCAAGATTTTAGGGAACCCAGCCTCTGCAGGACGGGTGGATCACATGGGCGGAGGTTTCCCGTGGC  
AGCGCTGGTCTCAGAGGTCCCGGCCGTGACAGTCCCATCCATCGACGATTACGGGCGAGACCGCCTTTCTCCA  
GACTTCTATGAAGAGTCAGAACTGACCTGGTGCCGAAGAGTCCCGGCCCGGATCTTTGTGGCTCTCTTTGAC  
TACGACCCGCTCACCATGTCCCCAAACCCAGATGCTGCAGAGGAGGAGCTTCCCTTAAAGAAGGCCAGATCATC  
AAGGTTTATGGTGATAAAGACGCTGATGGATTCTACCGTGGGGAAACCTGTGCCCGGCTTGGCCTTATCTCTGT  
AATATGGTCTCTGAGATAACAAGCAGATGATGAGGAGATGATGGATCAGCTTCTTAGACAGGGCTTTCTCCCTCTG  
AATACACCTGTGGAGAAAAAGAGAGAAGCAGGAGAAGTGCGAGGCGTCATTTCGGTATCGACGCGGAGAAATGGTG  
GCCCTGTATGACTACGACCCAGAGAAAGCTCGCCCAACGTCGATGTCGAGGCGGAACCTTACATTTTGACAGGA  
GATATTATTACAGTTTTTGGTGAATTTGATGAAGATGGATTTTATTATGGGGAGCTGAATGGGCAGAAAGGCCCTT  
GTGCCCTCAAACCTTCTTGAAGAAGTGCCTGATGACGTAGAAGTCTATCTTTCTGATGCTCCATCCCACTACTCT  
CAAGATACGCCAATGCGCTCAAAGGCAAAAGGAAGAAGAGTGTTCAATTTACACCTTAATCAGGCAATGTAGCC  
TTCACGTAAGTGAGCAACTGAAGATACCGATAAAGATACCAACTTAAGCTACCTTAACCGGGCAGTGTGGTAGA

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**FIGURE 3859B**

CTTAAGGCTTCATTGTGGGGTTAAAAAAAAAAAAAGATACAAAGAAATATGTCTCAAAAACTATTGGACCTAAA  
TAATTAGAATATTACTTGGTCTCAGTTGTAAAGCAACTGAATTTATAGTGAAGCAAATCATCTTTAATAATCATT  
TCCTACTATTTGCATTAAAGAAATATTTGAAAGGCCAACATTGGGAACATATTTCTTAACAAGCTAACTGTGTGTTT  
ACATAGAGAGAGCTGCATATTGCATTGTTAGCCACTCTTGGAAAAAGCACAACTAACAAACATGTTTACTATAG  
GAAGCTTTACTTTAGAACTTAACCCAAGGTCAAGCAGATGAGTAGTGAACACAGGTGATCGAGTGTGGCTCTG  
AACACTCCAAACACTGGCTCGAGTGGCCAGAACGTGTTTTCTTAAGTAACCTGCCTCTACCTTACGAGAGAGC  
TATGCTCCTCCTCAAAGCACAAATCATCTGTGACAGAAGTTGCTGCAACACGCGTTTGTGTTGGTATACCAATG  
CAATACTAAGTTGATGAAGCACGCAGCTCAAATGATCACATTAGATGGAATAGATGGTATCTTCAGGTGTACTTT  
GGGATGCTTTACTAGGTGTTTTCCATTAGAATTAGACCTTGATTTTAAATCCAAGCAAGCTTGAAGCCCCCTTGGC  
TTACAGCATTTGCCTGCTGAATACTAAACACTCACATGGCAAGAGTTGCTCTGGAGAGGTAGGGCCAGAGGAATG  
CTGCTGCACTGCCAACTCAGGCACATGCTTAGCTGTAAAGGGAAGCGAGGTGAAGTCGTCCTGCAGCGTATTAGA  
GTAAAGTCTACCCCTCTGAAGCACTATTAAGCGCTTAACGTATATTTAAATACTACCATGTGCTATCTACTGAG  
GAAGATTCATGTTCAATTATTTGAAATAATGCAAGCATCCACTAAGGGCCTTAAAGCTTTCTTTGATTATAATT  
AAGGTTCATTTTAGTTTTTTTTTTTTCTTTCAACCAGTGTGCCATCTCCAATATTTCTATAGTATACCAACCACC  
CAGGAATGCATTTTAAACAATATCAGGATTTTATATAACCAATAGTTTCAAATACAACAAAATTCCTTTATGAA  
CTTTGCTTTTAAAGACTACTGATGGGTACTCGGCCAACTTTACTATCAACCTAATTTAGATCATGCTCCTCCT  
GCCCTTAGTCTTCATTTATGAAGTGAATTATTACCTGCCTTAGCTTTGCCAAAGCAACGGCCACCCCGCACTCCC  
TCGAGACAGAGAAACGGAACCCACACATTTATGTCTGGGGCCTCTCTCTGGCGTGCTGTGGGAGAGGACCTTTGC  
TTCTCATGGCATACTTCAACAACTGAAAGAACAAATGAACCCCTGACCTTTCTGGTGGGAAACGGGGACAGT  
ACGATGTTACCAAGTGAATTTCTGTTGTTGGCGCTCACACACTCAATAAACTGTAACACTGTACCTACTAGGTTCC  
TCCTGAGGGTTTCAAGGTACAGCAAGGAGAGCTCCATCCCCACAGTCCATCTCCATTGCGGGTCACCTACGTCATC  
TATGGGTTTCTGGTAGTCCTGGGAGAGGCAGGGAAATGTCTCGAAAAAGAAAAGGGGCTGCTTTCCAAAGGCAA  
GAAACTGCTGAAAAAGCTGGGTGCAAGTGAATGATTCATGTGCTTCCGGACAACGCCAAATCTATGTAATTTTC  
TTTAATTCCAAACTAGGGCTTTTATGACTCAAGTACTTCTAAAAAAACCAATCTTCTCCCCTGACACCAGTAG  
AGAAATGCACTTTTGCATACCAACCACCTTTAAACCAACCACGAGAACAAGAGGAGCGGTTGCTCTCTGTCACC  
GCTGGCAGTCTGCTCTCATTGTCCAAGCTCTGATTTGGGAGGTGGGAGGGGACGCTTATTAACAAACGGGGGCG  
CATAGCTATCACCTGTAGCTCCCTCCCTACCTGTAATTCAGTCTTTGTGCATTTGTCATCTGCCCTTAAAGGAA  
TGATTTTCAACCTTTCTCCCTTCTCAAAATGCTTGCCCTCATAATGCATAACTTTCACTTTGACTCTGGTCTTGAA  
ATTCTAGTTTAATTGCTTGTGTTCTGCTTATAAATGCACAATGATTTGTACTGTCTAATAAAAAACAGTGT  
ATACTTTGTATGTGTCGTCATTCAAGTGGTCTTCATCCTGACACAGTGGTTTGAGATCAAGTTGTACAGGCTGTG  
CATTTTAAAGATACTAGTTTCAAGCTTTTCAAAGCCAGCCAGGCTACACACAGAAAATGTTTACTCAATCATTCAA  
AAAGAGAAAAGGAGAGAAAGTAACTTTGTTTGGTAAAGCACCAGTACTCCAACCTTCCAGAAAGCCGATTATCTT  
CATTGCTTTTAAATGTTCTATTCTGTGGCATATGGTTTTCTGTTACTTTGTTGTCAAAATGCCATACCCAAATAC  
ACAGCAATGAATGGCACACAAGTAATCCACATAATGCATAAGCCACACCAAAACCAGACTCAATTTAAATCTGCT  
CCAAATGAGTCCATACCCATCTTCATCATTGGCATTGAAACAAAAGACTTACTTACAAAGTTGCTGGCAGATGTA  
TTTGATGGTTACTCTTTTGAATTTCTGTCCACTTGTAATTTGTTTTACTCTTTTATACATACTTTTACAGACTGC  
CTTTCTTTTGAATTTATGGACGGTTTATAAATGAATGACAAAGCTTTCCCCATTGTGCTTTCAAAAACGCTATT  
ATAAATTGTAATATAATAGTATGTGGTAGATTTATTATTAAAGGAAATCCATGTGTGGTTAAGCTCTGTGTGGGT  
GTGTGCATGTGCACAGTTAGTGTAAATATTTTCTAGAAATAAAATTTGTTATTTAT

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**FIGURE 3860**

MREAAERRQQLQLEHDQALAVLSAKQQEIDLLQKSKVRELEEKCRTOSEQFNLLSRDLEKFRQHAGKIDLLGGSA  
VAPLDISTAPSKPFPQFMNGLATSLGKGQESAIGGSSAIGEYIRPLPQPGDRPEPLSAKPTFLSRSGSARCRSES  
DMENERNSENTSKQRYSGKVHLCVARYSYNPFDPNENPEAELPLTAGKYLYVYGDMDEDGFYEGELLDGQRGLVP  
SNFVDFVQDNESRLASTLGNEQDQNFINHSGIGLEGEHILDLHSPHIDAGITDNSAGTLDVNIDDIGEDIVPYP  
RKITLIKQLAKSVIVGWEPPAVPPGWTVSSYNVLVDKETRMNLTGSRKALIEKLNMAACTYRISVQCVTSRG  
SSDELQCTLLVGKDVVVAPSHLRVDNITQISAQLSWLPTNSNYSHVIFLNEEEEFDIVKAARYKYQFFNLRPNMAY  
KVKVLAKPHQMPWQLPLEQREKKEAFVEFSTLPAGPPAPPQDVTVQAGVTPATIRVSWRPPVLTPTGLSNGANVT  
GYGVYAKGQ RVAEVIFPTADSTAVELVRLRSLEAKGVTVRTLSAQGESVDSAVAAPPELLVPPTPHPRPAPQSK  
PLASSGVPETKDEHLGPHARMDEAWEQSRAPGPVGHMLEPPVGPGRSPSPSRILPQPQGTVPVSTTVAKAMARE  
AAQ RVAESSRLEKRSVFLERSSAGQYAASDEEDAYDSPDFKRRGASVDDFLKGSELGKQPHCCHGDEYHTESSRG  
SDLSDIMEEDEEEELYSEMQLLEDGGRRRPSGTSHNALKILGNPASAGRVDHMGRRFPGRSAGPQRSRPVTVPSIDD  
YGRDRLSPDFYEESETDPGAEELPARIFVALFDYDPLTMSNPDAEEEELPFKEGQIIKVYGDKDADGFYRGETC  
ARLGLIPCNMVSEIQADDEEMMDQLLRQGFLPLNTPVEKIERSSRRSGRRHSVSTRMVALYDYDPRESSPNVDVE  
AELTFCTGDIITVFGEIDEDGFYYGELNGQKGLVPSNFLEEVDDVEVYLSDAPSHYSQDTPMRSKAKRKKSVHF  
TP



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**FIGURE 3861**

GGCGGTGTTGAGGTTGGGTACGGGATGCGGGTCTTTGACTGAAGGGGTAGGCCAAGTGGAGGTATCAGGGACGT  
CGCGCGGCACAGAAGAGGACCAGCCTGGACGCCGGGGACGCTGTATGTACGGCGGAGCGGGGGCCGCGCCAAA  
CCCGAGAGGAAAAGCGGCGCGAAGGAGGAGGCCGGGCCAGGCGGTGCCGGCGGTGGGGGCAGCCGAGTGGAGCTC  
TTGGTTTTCGGCTATGCCTGCAAGCTGTCCGGGACGACGAGCGGGCCCTGGCTCAGGAACAGGGACAGCACCTC  
ATCCCTGGATGGGGGACCACAAGATCCTCATCGACAGATATGATGGACGTGGTCACCTGCATGACCTTTCTGAG  
TACGATGCTGAGTATCCACGTGGAACAGAGATTATCAGCTGCTGAAGAGGAGGCGCAATAGAGGCCCTGTGT  
GATGAAGAGAGGTATTTAGCCTTGCCATACGACTTGCTTGAGGAGGAGGCAAGGCAAGAGGAAGAATACAAGCGA  
TTGAGTGAAGCACTAGCAGAGGATGGGAGCTACAATGCCGTGGGGTTCACTTACGGTAGCGACTATTACGACCCG  
TCAGAGCCGACGGAGGAGGAGGAGCCTTCCAACAGAGAGAAAAAATGAGGCCGAAAATTTAGAGGAAAATGAA  
GAGCCCTTCGTTGCCCTTAGGATTGAGCGTCCCGTCTGACGTGGAGTTGCCACCAACCGCTAAAATGCACGCC  
ATCATCGAGCGCACGGCCAGCTTCGTGTGCAGGCAGGAGCACAGTTTGAGATCATGCTGAAGGCCAAGCAGGCC  
CGGAATCCAGTTTGACTTTCTGCGCTTCGACCACTACCTCAACCCCTACTATAAGTTCATCCAGAAAGCCATG  
AAAGAGGGACGCTACACTGTCTTGGCAGAAAACAAAAGTGACGAGAAAAAAAATCAGGAGTCAGCTCTGACAAT  
GAAGATGATGATGATGAAGAAGATGGGAATTACCTTCATCCCTCTCTCTTTGCTTCCAAGAAGTGTAACCGCCTT  
GAAGAGCTGATGAAGCCCTTGAAGGTAGTGGACCCAGATCATCCCTCGCAGCACTTGTTTGTGAAGGCACAGGCT  
GACAGTTCCACTCCCACCCACACAACGCAGACGGTGCGCCTGTGCAGCCCTCCCAGGTGGAGTACACGGCAGAC  
TCGACCGTGGCAGCCATGTATTACAGCTACTACATGCTACCGGACGGCACTTACTGCCTGGCGCCGCCCTCCCG  
GAATCGACGTGACTACTTACTACAGCACCTTCCTGTGCGGTGACCGTGTCTAACTCCCTGGAGTGACGACCA  
CCGCCCCACCACCTCCTGGGACCACACCACTACCGCCCCCAACCACAGCAGAGACTAGCAGCGGGGCCACCTCCA  
CAACCACCACCACAAGTGCACCTTGCCCCCGTGGCCGCCATCATCCCCCGCCCCCGACGTCCAGCCCGTGATTG  
ACAAGCTGGCCGAGTATGTGCCAGGAACGGCCTGAAGTTCGAGACCAAGTGTTCGTGCCAAGAATGATCAAAGAT  
TTGAGTTCTTCGAGCCGTGGCACCAGTATAATGCTTATTATGAGTTTAAGAAGCAGTTCTTCTCCAGAAAGAAG  
GGGGCGATAGCATGCAGGCTGTGTCTGCACCAGAAGAGGCTCCACAGACTCTGCTCCCGAGAAGCCAAGTGATG  
CTGGGGAGGATGGCGCGCCTGAAGACGCAGCCGAGGTGGGAGCACGGGCAGGCTCAGGCGGGAAGAAGGAGGCAT  
CGTCCAGTAAGACCGTCCCGGACGGGAAGCTGGTGAAAGCTTCCTTTGCTCCAATAAGCTTTGCAATCAAGGCCA  
AAGAAAATGATCTGCTTCCCTTGAAAAAAATCGTGTTAAGCTAGATGATGACAGTGATGATGATGAAGAAAGCA  
AAGAAGGCCAAGAAAGTTCTAGTAGTGCTGCAAACTAACCAGCAGTTGCCCCACCTGTGTAGTTGTTGAGG  
AGAAGAAGCCTCAACTTACCCAGGAGGAGCTAGAAGCAAAGCAAAGCAAAGCTGGAAGATCGCCTCGCAG  
CTGCTGCCCGGAAAAAGCTGGCCAGGCGTCTAAGGAGTCAAAAGAGAAACAGCTTCAAGCAGAACGTAAAGGA  
AAGCGGCGTTATTTTTACAGACCTCAAAAATCCTCTGCCGGAAGCAGAAGCTGGGAAAATGAGGAGAGTCCCTT  
TCAGTGTGAGG

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**FIGURE 3862**

GTCCGCAATGTTGCCAGTGTCTGTCTGCAGATTGGCTACCCAACTGTTGCATCAGTACCCCATTTCTATCATCAAC  
GGGTACAAACGAGTCCTGGCCTTGTCTGTGGAGACGGATTACACCTTCCCCTCGCTGAAAAGGTCAAGGCCTTC  
TTGGCTGATCCATCTGCCTTTGTGGCTGCTGCCCCGTGGCTGCTGCCACCACAGCTGCTCCTGCTGCTGCTGCA  
GCCCCAGCTAAGGTTGAAGCCAAGGAAGAGTCGGAGGAGTCGGACGAGGATATGGGATTGGTCTCTTTGACTAA  
TCACCAAAAAGCAACCAACTTAGCCAGCTTTATTTGCAAAACAAGGAAATTAAAGGCTTACTTCTTTAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3863**

MLPVSVCRLATQLLHQYPILSSTGTNESWPCLWRRITPSHSLKRSRPSWLIHLPLWLLPLWLLPPQLLLLLLLLPQ  
LRLKPRKSRRSRTRIWDLVSLTNHQKATNLASFICKTRK

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**FIGURE 3864A**

CGAAGGGGGGTGGGCCGGGGGAGGGGAGGTTTCGTTCCGCGGAGCGCAGCCAGAACCGGGACCAAGAATCGCCTTC  
AGCCCTGTCTGGTGATCCTTGGCAGAAAGTGAGGAGGAAAAACACCCCATTTGTTAGATGAGGTCTTAATCATGG  
AACATTTGAAGTCACGTAAAGAAGGTTCTTTGGCATGGACACAAGTTCAGTGGGAGGATTAGAATTGACTGATCA  
GACTCCTGTTTTATTAGGGAGTACGGCCATGGCAACTAGTCTCACGAATGTAGGAACTCATTAGTGGTCCAGC  
TAATCCTTTAGTGTCTAGATCTAATAAGTTTCAGAACTCGTCAGTGAAGATGATGATGATGTTGTTTTATCGA  
ACCTGTACAACCTCCCCACCTTCTGTACCAGTGGTAGCTGATCAAAGAACCATAACATTTACATCATCAAAAA  
TGAAGAACTACAAGGAAATGATTCCAAAATTACTCCTTCTCAAAGAGTTGGCATCTCAGAAGGGGAAGTGAAG  
TGAGACAATTGTCATTGATGATGAAGAGGACATGGAACAAATCAAGGGCAAGAGAAAAATTCCTCCAATTTTAT  
TGAACGAAGACCTCCTGAGACTAAAAACAGAACCAATGATGTGGATTTCTCCACTTCCAGTTTTTCAAGAAGTAA  
GGTAAATGCAGGAATGGGTAAATAGTGGTATCACCACAGAACAGACTCTGAAATTCAGATTGCTAATGTTACAAC  
TTTAGAAACAGGTGTAAGCTCTGTGAATGATGGCCAATTAGAAAATACTGACGGGCGAGATATGAACCTTAATGAT  
TACACATGTAACATCACTGCAGAATACCAACTTGGGAGATGTCTCTAACGGACTGCAGTCAAGTAATTTTGGTGT  
TAATATACAAACATACACCCCATCTTTAACTTTCACAGACCAAGACTGGAGTAGGACCTTTTAACTCCTGGTAGAAT  
GAATGTGGCAGGAGACGTTTTTTCAGAAATGGAGAATCTGCAACTCATCATAATCCTGATTCTTGGATCTCCAGTC  
AGCTTCATTTCCCGTAATCAGAAACAACAGGGGTGGACTCTTTATCACCAGTGGCCTCACTTCCTAAACAGAT  
TTTCCAGCCGTCTGTCCAACAGCAGCCTACTAAACAGTTAAAGTCACTTGTGCAAACTGCAAAAACCTTTACA  
GAAGGGCCAGACAGCTTATCAACGAAAAGGATCAGCTCACCTCTTTTGTCTTACCACCTGCCTTTCTTCTCTC  
CCACAAGCCTGTCTCAAAGAACTCTGTGTTATGTGTAAAAAGATATAACTACAATGAAAGGAACCATTTGTTGC  
TCAAGTGGATTCAAGTGAGTCCCTCCAGGAATTTCTGTAGTACATCTTGTTTATCTCTATGAAGACAAACAGAA  
TCCTACTAAAGGAGCTCTAAATAAATCAAGATGTACAATCTGTGGTAAACTAACTGAGATTCCGCATGAAGTCAG  
CTTTAAAAATATGACTCATAAGCTGTGCAGTGACCCTGCTTTAATAGATATAGAATGGCCAATGGTTTAAATAAT  
GAATTGCTGTGAACAGTGTGGAGAGTACTTGGCCAGTAAAGGTGCTGGAAATAATGTTCTGGTGATTGATGGTCA  
ACAGAAAAGATTTTGTCTGCAAGTTGTGTGTCAGTGAATACAAACAGGTAGGTAGCCATCCAAGCTTCCTGAAGGA  
GGTTCGAGATCACATGCAGGACTCTTTCTTAATGCAGCCTGAGAAATATGGAAAACGACAACCTGTACTGGTTG  
CCGAACACAGTGCAGGTTTTTTGATATGACTCAGTGTATAGGTCTAATGGATATATGGAGCCATATTGTTCAAC  
TGCTTGTATGAACAGTCACAAGACAAAATATGCAAAATCACAAAGTTTGGGAATTATTTGCCATTTTGTAAAGCG  
AAACTCTTTACCTCAATACCAAGCCACAATGCCTGATGGAAAACGTGACAACCTTTGCAATTCAGTTGTGTGGC  
TAAATTTAGGCTCTAAGTATGCAGTCACTCCAAATGGCCAGTTTGTAGCGCCAAGTGATATTCAGTTGAAATG  
CAACTACTGCAAAAATTCCTTTTGTTCAAAACAGAAATCCTGGAATGGGAGAACAAAGTGCATCAGTTCTGCAG  
CAAACTTGTTCAGATGACTATAAGAAGTTGCATTGCATAGTTACATATTGCGAATACTGTCAAGAGGAGAAGAC  
TCTTCATGAAACAGTAAATTTCTCTGGCGTTAAGAGACCTTTCTGTAGTGAAGGCTGCAAATTATTATACAAACA  
GGATTTTGCCAGACGTTTAGGATTGAGATGTGTTACTTGCAACTATTGTTCTCAGCTATGTAAGAAGGGAGCAAC  
TAAAGAACTCGATGGTGTGTGAGAGATTTCTGCAGTGAAGATTGCTGTAAAAAATTCAGGATTGGTACTACAA  
GGCTGCAAGGTGTGACTGTTGTAAATCTCAAGGAACCTTAAAGAGCGAGTTCAAGTGGCGTGGGGAAATGAAACA  
TTTCTGTGATCAACATTGCTTACTGCGTTTCTACTGTCAACAAAATGAGCCCAACATGACAACCTCAGAAAGGACC  
TGAAAACCTTACATTATGATCAGGGTTGTGACAGATCTCGAACCAAAATGACAGGTTCAGCACCACCCCTTCTCC  
AACACCTAACAAAGAGATGAAGAACAAGCAGTTCTTTGCAACCTTTAACAATGACAAAAGCTACTTACTGTAA  
ACCTCACATGCAGACCAATCTTGTGACAGATGATACTTGGAGGACAGAATATGTTCCAGTGCCTATCCCTGT  
GCCTGTGTATATCCAGTTCCATGACATGTACAGTCAAGATATTCCTGTTCTACTACAGTTCTGTTCCTGT  
GCCAGTTCCCTGTTTTTCTGCCTGCTCCATTGGACAGCAGTGAGAAGATTCTGCAGCAATTGAGGAGCTAAAAAG  
CAAGGTTTCTTCAGATGCTCTTGATACAGAGTTGCTTACAATGACGGATATGATGAGTGAAGACAGGGGAAAAAC  
AGAGACAACCAACATCAACAGTGAATTATTGAAACAGATATAATTGGTTTCAGACCTTTTGAAGAACCTTGACCC  
AGAGACACAGTCCAGCATGCCGTGATGTACCATATGAACCAGATTGGATATCGAAATAGATTTTCCAGAGCTGC  
TGAGGAGCTTGATATGGAAAATGAATTTTTATTACCACCTGTTTTTGGCGAAGAATATGAGGAACAGCCAGACC  
TCGATCTAAAAAAAAGGGAGCCAAGAGAAAGGCTGTATCAGGATACAGTCTCATGATGATAGTTCTGACAATTC  
AGAATGCAGCTTTCTTTCAAATATACGTATGGCGTAAATGCATGGAAACACTGGGTCAAAACTAGGCAACTTGA  
TGAAGATCTTCTGGTATTAGATGAGTTAAATCTCTAAATCAGTAAAGTTAAAGAGGATCTACTCTCTCACAC  
CACAGCTGAGCTTAACTATGGGTTAGCTCATTGTCAATGAGATCCGACGGCCAAATGGAGAGAATTATGCACC

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**FIGURE 3864B**

TGACAGCATCTATTACCTTTGCCTTGGAATACAGGAGTATTTGTGTGGAAGTAATCGAAAAGACAACATATTTAT  
TGATCCTGGATACCAAACATTTGAGCAAGAATTGAATAAAATACTGCGAAGCTGGCAACCAAGCATACTTCCAGA  
TGGGTCAATATTCTCTCGAGTTGAAGAAGACTATCTCTGGAGGATAAAACAACCTAGGATCACACTCTCCAGTAGC  
TCTTCTGAATACACTGTTCTACTTTAACACTAAGTATTTTGGCCTGAAAACAGTGAACAACACTTAAGACTTTC  
CTTTGGCACTGTGTTTAGGCATTGGAAAAAAATCCTTTAACGATGGAAAACAAAGCGTGTCTTCGATACCAAGT  
GTCTTCCTTGTGTGGAACAGATAATGAAGATAAAATTACTACTGGAAAAAGAAAACATGAAGATGATGAGCCAGT  
ATTTGAACAAATTGAAAACACAGCCAATCCTTCCAGATGTCCTGTGAAAATGTTTGAATGCTACTTGTCTAAAAG  
TCCACAGAACTTAATCAGAGGATGGATGTTTTTTATTTGCAACCAGAATGCTCTAGTTCTACAGATAGCCCTGT  
CTGGTATACGTCTACTTCACTGGACCGAAACACCTTGGAAAATATGCTTGTACGGGTCTTCTAGTAAAAGATAT  
TTATGATAAAGACAATTATGAACTGGATGAAGACACAGACTTAAAAAAGGAACGTTGCAGAAGCAATCGGGATAAAA  
CAGCATTAGATAGTCATGCTGCTAGATCTTTATTATGGAAAACATTTCAAGTTTACTCCTTCTGTTTTGAGTTTT  
GTAGCAGTGTACCCACGCTGGGTATTACCATGTAAATAATCTGTGAGTGAAAGTTGCCATTATTCTATGTAGTGG  
TTTTAGGATACTTAACAAATACATTCAAATTCTTTTTTTATTATTATTATTGATTAGGTATGTTTGTAACTTT  
TTACATTACAGAATATGAATGAGAATGTGCCATGTATAATTTTTTTCTGTAGTAAGAAACATCCATATTGCACA  
ACTCTACTGTTGCAAAGCTTCCTTGAAGGGGGCTCTTTTACTGGGTCTTAACCAGATGGTTGTGTATGGGTAG  
CACTACTAAAAGTTTAGAAGTTGCAGTGTCTTTCGGAATTTTTAAATAAACTGTAAACTAATAGGCTGGGGTTT  
TTGTTTTGTTTTGGGGTTTTGTTTTGTTTTGTTTTACATTTTAGTTACTGAAGCCTTACAAGGTTATGTAGAGAG  
ATACCATCTTCTGTACCAAAAATAGACAAGAGAATGCTGTCAATATTGGTGTACTGTAATGTGAATCTATGCTGG  
TGAAAACAATTTTTTGTTCCTTTATTTAAACCTTAGTGTCTTTTTCTCATTTGTGGCTTTCTGCATCACCCAAT  
CAATAAAAAACAAATATATATATGT

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**FIGURE 3865**

MDTSSVGGLELTDQTPVLLGSTAMATSLTNVGNFSFGPANPLVSRSNKFQNSSVEDDDDDVVFIEPVQPPPPSVPV  
VADQRTITFTSSKNEELQGNDSKITPSSKELASQKGSVSETIVIDDEEDMETNQGEKNSSNFIERRPPETKNRT  
NDVDFSTSSFSRSKVNAGMGNNGITTEPDSEIQIANVTTLTETGVSSVNDGQLENTDGRDMNLMITHVTSLQNTNL  
GDVSNGLQSSNFGVNIQTYTTPSLTSQTKTGVPFNPGRMNAGDVFNQGESATHHNPDSWISQSASFPRNQKQPG  
VDSLSPVASLPKQIFQPSVQQQPTKPVKVT CANCKKPLQKGQTAYQRKGS AHLFCSTTCLSSF SHKPAPKKLCVM  
CKKDITTMKGTIVAQVDSSESFQEF CSTSCLSLYEDKQNP TKGALNKSRTCICGKLTEIRHEVSFKNMTHKLCSD  
HCFNRYRMANGLIMNCCEQC GEYLPSKGAGNNVLVIDGQQKR FCCQSCVSEYKQVGSHPSFLKEVRDHMQDSFLM  
QPEKYGKLTCTGCR TQCRFFDMTQCIGPNGYMEPYCSTACMNSHKTKYAKSQSLGIICHFCRNSLPQYQATMP  
DGKLYNFCNSSCVAKFQALSMQSSPNGQFVAPSDIQLKCNYCKNSFC SKPEILEWENKVHQFCSKTCSDDYKKLH  
CIVTYCEYCQEEKTLHETVNFSGVKRPF CSEGCKLLYKQDFARRLGLRCVTCNYCSQLCKKGATKELDG VVRDFC  
SEDCCKKFQDWYYKAARCDCKSQGTLKERVQWRGEMKHFC DQHCLLRFYCQONEPNMTTQKGPENLHYDQGCQT  
SRTKMTGSAPPPSPTPNKEMKNKAVLCKPLTMTKATYCKPHMQTKSCQTDDTWRT EYVPVPIPVVYIPVPMHMY  
SQNIPVPTTVPVPVPVFLPAPLDSSEKIPAAIEELKSKVSSDALDTELLTMTDMSEDEGKTETTNINSVIE  
TDIIGSDLLKNSDPETQSSMPDVPYEPDLIDIEIDFPRAAEELDMENEFLLPPVFGEEYEEQPRPRSKKKGAKRKA  
VSGYQSHDDSSDNSECSFPFKYTYGVNAWKHWKTRQLDEDLVLDELKSSKSVKLKEDLLSHTTAE LNYGLAHF  
VNEIRRPNGENYAPDSIYYLCLGIQEYLCGSNRKDNIFIDPGYQTFEQELNKILRSWQPSILPDGSIFSRVEEDY  
LWRIKQLGSHSPVALLNTLFYFNTKYFGLKTVEQHLRLSFGTVFRHWKNPLTMENKACLRYQVSSLCGTDNEDK  
ITTKRKHEDDEPVFEQIENTANPSRCPVKMFECYLSKSPQNLNQRMDFYQLQPECSSSTDSPVWYTSTSLDRNT  
LENMLVRVLLVKDIYDKDNYELDEDTD

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**FIGURE 3866**

ATGGATTGGGGCACGCTGCAGACGATCCTGGGGGGTGTGAACAAACACTCCACCAGCATTGGAAAAGATCTGGCTC  
ACCGTCCTCTTCATTTTTCGCATTATGATCCTCGTTGTGGCTGCAAAGGAGGTGTGGGGAGATGAGCAGGCCGAC  
TTTGTCTGCAACACCCTGCAGCCAGGCTGCAAGAACGTGTGCTACGATCACTACTTCCCCATCTCCACATCCGG  
CTATGGGCCCTGCAGCTGATCTTCGTGTCCAGCCCAGCGCTCCTAGTGGCCATGCACGTGGCCTACCGGAGACAT  
GAGAAGAAGAGGAAGTTCATCAAGGGGGAGATAAAGAGTGAATTTAAGGACATCGAGGAGATCAAAACCCAGAAG  
GTCCGCATCGAAGGCTCCCTGTGGTGGACCTACACAAGCAGCATCTTCTTCCGGGTCATCTTCGAAGCCGCCTTC  
ATGTACGTCTTCTATGTCATGTACGACGGCTTCTCCATGCAGCGGCTGGTGAAGTGCAACGCCTGGCCTTGTCCC  
AACACTGTGGACTGCTTTGTGTCCCGGCCACGGAGAAGACTGTCTTCACAGTGTTTCATGATTGCAGTGTCTGGA  
ATTTGCATCCTGCTGAATGTCACCTGAATTGTGTTATTTGCTAATTAGATATTGTTCTGGGAAGTCAAAAAAGCCA  
GTTTAA

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**FIGURE 3867**

MDWGTLQTLGGVNHSTSIGKIWLTVLFIFRIMILVVAKEVWGDEQADFVCNTLQPGCKNVCYDHYFPISHIR  
LWALQLIFVSSPALLVAMHVAYRRHEKKRKFIKGEIKSEFKDIEEIKTQKVRIEGLWWTYTSSIFFRVIFEAAF  
MYVFYVMYDGFMSQRLVKCNAWPCPNTVDCFVSRPTEKTVFTVFMIAVSGICILLNVTELCYLLIRYCSGKSKKP  
V



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**FIGURE 3868**

CAGAGGGGTCCATAGGGCGTTGTTCTGGATTCCGGTCGTAACCTAAAGGGAACTTTACAATGTCCGGAGCCCT  
TGATGTCCTGCAAATGAAGGAGGAGGATGTCCTTAAGTTCCTTGACAGCAGGAACCCACTTAGGTGGCACCAATCT  
TGACTTCCAGATGGAACAGTACATCTATAAAAGGAAAAGTGATGGCATCTATATCATAAATCTGAAGAAGACCTG  
GGAGAAGCTTCTGGCCGCTTCACTCCTGGAACCTTCACTAACAGATCCAGGCAGCCTTCCGGGAGCCACGGCTT  
CTTGTGGTTACTGACCCAGGGCTGACCCACCAGCCTCTCAGGAGGCGTCTTATGTTAACCTACCTACCATTCG  
TCTGTGTAACAGATTCTCCTCTGCGCTATGTGGACATTGCCATCCCATGCAACAACAAGGGAGCTCGCTCAGTGG  
GTTTGATGTGGTGGATGCTGGCTCGGGAAGTTCTGCGCATGCGTGGCACCATTTCTCGTGAACACCCATGGGAGG  
TCATGACTGATCTCTACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAGCAGGCTGCTGCTGAAAAGGCGG  
TGACCAAGGAGGAATTTCAAGGTGAATGGACTGCTCCAGCTCCTGAGTTCAGTCTACTCAGCCTGAGGTTGCAG  
ACTGGTCTGAAGGTGTGCAGGTGCCCTCTGTGC

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**FIGURE 3869**

GGGAAACTTTCACAATGTCCGGAGCCCTTGATGTCCTGCAAATGAAGGAGGAGGATGTCCTTAAGTTCCTTGCA  
CAGGAACCCACTTAGGTGGCACC AATCTTGACTTCCAGATGGAACAGTACATCTATAAAAGGAAAAGTGATGGCA  
TCTATATCATAAATCTGAAGAAGACCTGGGAGAAGCTTCTGCTGGCAGCTCGTGCTATTGTTGCCATTGAAAACC  
CTGCTGATGTCAGTGTTATATCCTCCAGGAATACTGGCCAGAGGGCTGTGCTGAAGTTTGCTGCGGCCACTGGAG  
CCACTCCAATTGCTGGCCGCTTCACTCCTGGAACCTTCACTAACCAGATCCAGGTCTTATGTTAACCTACCTACC  
ATTGCTCTGTGTAACAGATTCTCCTCTGCGCTATGTGGACATTGCCATCCCATGCAACAACAAGGGAGCTCGCTC  
AGTGGGTTTGATGTGGTGGATGCTGGCTCGGGAAGTTCTGCGCATGCGTGGCACCATTCTCGTGAACACCCATG  
GGAGGTCATGACTGATCTCTACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAGCAGGCTGCTGCTGA

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**FIGURE 3870**

ATGGAACAGTACATCTATAAAAGGAAAAGTGATGGCATCTATATCATAAATCTGAAGAAGACCTGGGAGAAGCTT  
CTGCTGGCAGCTCGTGCTATTGTTGCCATTGAAAACCCTGCTGATGTCAGTGTTATATCCTCCAGGAATACTGGC  
CAGAGGGCTGTGCTGAAGTTTGCTGCGGCCACTGGAGCCACTCCAATTGCTGGCCGCTTCACTCCTGGAACCTTC  
ACTAACCAGATCCAGGCAGCCTTCCGGGAGCCACGGCTTCTTGTTGTTACTGACCCCAGGGCTGACCCACCAGCC  
TCTCACGGAGGCGTCTTATGTTAACCTACCTACCATTGCTCTGTGTAACAGATTCTCCTCTGCGCTATGTGGACA  
TTGCCATCCCATGCAACAACAAGGGAGCTCGCTCAGTGGGTTTGATGTGGTGGATGCTGGCTCGGGAAGTTCTGC  
GCATGCGTGGCACCATTCTCGTGAACACCCATGGGAGGTCATGACTGATCTCTACTTCTACAGAGATCCTGAAG  
AGATGGGTGAATGGACTGCTCCAGCTCCTGAGTTCACTGCTACTCAGCCTGAGGTTGCAGACTGGTCTGAAGGTG  
TGCAGGTGCCCTCTGTGCCTATTACAGCAGTTCCTACTGAAGACTGGAGCGCTCAGCCTGCCACGGAAGACTGGT  
CTGCAGCTCCC

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**FIGURE 3871**

MEQYIYKRKSDGIYIINLKKTWEKLLLAARAIVAIENPADVSVISSRNTGQRAVLKFAAATGATPIAGRFTPGTF  
TNQIQAAFREPRLLVVDPRADPPASHGGVLC

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**FIGURE 3872**

GCGGCAGGTGAGTAGCTGTGCGAATTCGGTTCTCTAGGGAACCTCTTCTTCGCCTGCTGGCCTTACCTGGGCTCC  
CCGCTTCTCTGGAGGGGAGGCGGTGCGGGAACCTCCCGTAGGCGTGAGCTGGAGCGCGCGCCGCTGCTCTCTCCA  
GGTCCCGCGCGCCAGTTCCGCCTCCGCAAAGCCCCGTCCCTCTCTTCCGCAGGCACCAATGTTCCTGACTGCGCTCC  
TCTGGCGCGGCCGCATTCCCGGCCGTCAGTGGATCGGGAAGCACCGGCGGCCGCGGTTTCGTGTCGTTGCGCGCCA  
AGCAGAACATGATCCGCCGCCTGGAGATCGAGGCGGAGAACCATTACTGGCTGAGCATGCCCTACATGACCCGGG  
AGCAGGAGCGCGGCCACGCCGCGGTGCGCAGGAGGGAGGCCTTCGAGGCCATAAAGGCGGCCGCCACTTCCAAGT  
TCCCCCGCATAGATTCAATTGCGGACCAGCTCGACCATCTCAATGTCACCAAGAAATGGTCCTAATCCTGAGTCG  
TCACCCCTTGATTTTATGGATCACGGAGCTGACCATCTTTACCTGGTCCTGGAACCTGAAAACTGTAGCTTGTGT  
GAAAATGAGCCTTTGGACCAGTCTTTATTAAAACAAACAAACATGAGTAGTCTGCATATCGAATATCTAGAGCTC  
TAAACCCCCCAATACTTAAAAGTCTAATTGCTGTCCTGTGGTTTCATTAGTCTGATAGGAAGATAGGGATTTCCCT  
CAGTCACAGATGATATTTTGAAGGAAAGCTGCAATAAAGCCACAATGATTGAGGTCTTTGCTTAAGTATGAGAT  
ACTTGATGGGGGCTTTATCATGCAACATTAGTTTGCTTACCTTAAGAATTGCCCAAAAATGAAAGAAAATATGAG  
CTTTTCAGTTAAACATACTCCTAAAAACATTTTCCGGGATTTTACTACTAAAATTGGACATTTAAGCGAAGTAAA  
AGAGGCCGGGTGCGGTGGCTCACGCCTGTAATCCCAACACTTTAGGAGTCCAAGGCGGGCGGATCACTTGAGGTC  
AGGAGTTCAAGACCAGCTTGGCCAAGGTGATAAAACCCGCTCTACTAATAACAAAAAAATTAGCTGGGTATGTT  
GGTGCAGGCTTGCAATCCAGCTACTTGGGACGCTGAGGTGGGAGGATCGCCTGAACCTCAGAGGCAGAGGTTGC  
AATGAAGCGGAGGTTGCAGTGAGCCGAGAGCATGCCGCTGCACTCCAGCCTGGGAGACTGCATCTCAAAAAAGAA  
AAATAAACGAAGTAAAAGATATTTATCAGAAAAA

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**FIGURE 3873**

MFLTALLWRGRIPGRQWIGKHRRPRFVSLRAKQNMIRRLIEAENHYWLSMPYMTREQERGHAAVRRREAFEAIK  
AAATSKFPPHRFIADQLDHLNVTKKWS

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**FIGURE 3874**

CTCTTCCTAAGCCGGCGCTCGGCGAGTTCTCCCAGGAGAAGGCCATGTTTCAGTTCGAGCGCCAAGATCGTGAAGC  
CCAATGATGAGAAGCCGGACGAGTTCGAGTCCGGCATCTCCCAGGCTCTTCTGGAGCTGGAGATGAACTCGGACC  
TCAAAGCTCAGCTCAGGGAGCTGAATATTACGGCAGCCAAGGAAATGAAC TTGGTGGTGGTTCGGAAAGCTATCA  
TAATCTTTGTTCCCATTCCTCAACTGAAATCTTTCCAGAAAATTCAAGTCCGGCTAGTACGCGAATTGGAGAAAA  
AGTTCAGTGGGAAGCATGTCGTCTTTATCGTTTCAGAGAAGAATTCTGCCTAAGCCAAC TCGAAAAAGCCGTACAA  
AAAATAAGCAAAAGCGTCCCAGGAGCCATACTCTGACAGCTGTGCACGATGCCATCCTTGAGGACTTGGTCTTCC  
CAAGCGAAATTGTGGGCAAGAGAATCCGCGTGAACTAGATGGCAGCCGGCTCATAAAGGTTCA TTTGGACAAAG  
CACAGCAGAACAATGTGGAACACAAGGTTGAACTTTTTCTGGTGTCTATAAGAAGCTCACGGGCAAGGATGTTA  
ATTTTGAATTCCTCAGAGTTTCAATTACAAACAAAAATGACTACATAAAAAATATATATTACA

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**FIGURE 3875**

MFSSSAKIVKPNDKPDDEFESGISQALLELEMNSDLKAQLRELNITAAKEIELGGGRKAIIFVPIPOLKSFQKI  
QVRLVRELEKKFSGKHVVFIVQRRILPKPTRKSRTKNKQKRPRSHTLTAVHDAILEDLVFPSEIVGKRIRVKLDG  
SRLIKVHLDKAQQNNVEHKVETFSGVYKKLTGKDVNFEFPEFQL



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**FIGURE 3876**

GCCTGCGGGCAGCCGTGCCGAGAATGAACCCAGCACCCAGCTACCCAACGGCCTCGCTCTACGTGGGGGACC  
TCCACCCCGACGTGACTGAGGCGATGCTCTACGAGAAGTTCAGCCCGGCAGGGCCCATCCTCTCCATCCGGATCT  
GCAGGGACTTGATCACCAGCGGCTCCTCCAACCTACGCGTATGTGAACCTCCAGCATACGAAGGACGCGGAGCATG  
CTCTGGACACCATGAATTTTGATGTTATAAAGGGCAAGCCAGTACGCATCATGTGGTCTCAGCGTGATCCATCAC  
TTCGAAAAAGTGGAGTGGGCAACATATTCGTTAAAAATCTGGATAAGTCCATTAATAATAAAGCACTGTATGATA  
CAGTTTCTGCTTTTGGTAACATCCTTTCTGTGTAACGTGGTTTGTGATGAAAATGGTTCCAAGGGTTATGGATTTG  
TACACTTTGAGACACACGAAGCAGCTGAAAGAGCTATTAAAAAAATGAACGGAATGCTCCTAAATGGTCGCAAAG  
TATTTGTTGGACAATTTAAGTCTCGTAAAGAACGAGAAGCTGAACCTGGAGCTAGGGCAAAGAGTTCCCAATG  
TTTACATCAAGAATTTTGGAGAAGACATGGATGATGAGCGCCTTAAGGATCTCTTTGGCAAGTTCCGGCCCCGCCT  
TAAGTGTGAAAGTAATGACCGATGAAAGTGGAAAATCCAAAGGATTGGATTGTAAAGCTTTGAAAGGCATGAAG  
ATGCACAGAAAGCTGTAGATGAGATGAATGGAAAGGAGCTCAATGGAAAACAAATTTACGTTGGTCGAGCTCAGA  
AAAAAGTGGAAACGGCAGACGGAACCTTAAGCGCACATTTGAACAGATGAAGCAAGATAGGATCACCAGATACCAGG  
TTGTTAATCTTTATGTGAAAAATCTTGATGATGGTATTGATGATGAACGTCTCCGGAAGCGTTTTCTCCATTTG  
GTACAATCACTAGTGCAAAGGTTATGATGGAAGGTGGTCGAGCAAAGGGTTTGGTTTTGTATGTTTCTCCTCCC  
CAGAAGAAGCCACTAAAGCAGTTACAGAAATGAACGGTAGAATTGTGGCCACAAAGCCATTGTATGTAGCTTTAG  
CTCAGCGCAAAGAAGAGCGCCAGGCTTACCTCACTAACGAGTATATGCAGAGAATGGCAAGTGTACGAGCTGTGC  
CCAACCAGCGAGCACCTCCTTCAGGTTACTTCATGACAGCTGTCCACAGACTCAGAACCATGCTGCATACTATC  
CTCCTAGCCAAATTGCTCGACTAAGACCAAGTCCTCGCTGGACTGCTCAGGGTGCCAGACCTCATCCATTCCAAA  
ATAAGCCCAGTGCTATCCGCCCAGGTGCTCCTAGAGTACCATTAGTACTATGAGACCAGCTTCTTCACAGGTTT  
CACGAGTCATGTCAACGCAGCGTGTTTGCTAACACATCAACACAGACAGTGGGTCCACGTCTGCAGCTGCTGCTG  
CTGCTGCAGCTACCCCTGCTGTGCGCACGGTTCCACGGTATAAATATGCTGCGGGAGTTTCGCAATCCTCAGCAAC  
ATCGTAATGCACAGCCACAAGTTACAATGCAACAGCTTGCTGTTTCATGTACAAGGTCAGGAACTTTGACTGCCT  
CCAGGTTGGCATCTGCCCTCCTCAAAGCAAAAGCAAATGTTAGGTGAACGGCTCTTTCTCTTATTCAAGCCA  
TGCACCCTACTCTTGCTGGGAAAATCACTGGCATGTTGTTGGAGATTGATAATTCAGAACTTCTTTATATGCTCG  
AGTCTCCAGAGTCACTCCGTTCTAAGGTTGATGAAGCTGTAGCTGTACTACAAGCCCACCAAGCTAAAGAGGCTA  
CCCAGAAAGCAGTTAACAGTGCTACCGGTGTTCCAACCTGTTTAAAAATTGATCAGAGACCAGAAAAGAAATTTGT  
GCTTCACCGAAGAAAAATATCTAAACATCGAGAACTATGGGAAAAAAATTGCAAAATCTAAAAATAAAAAATGC  
AAAATCTAAAAATAAAAAATGGAAGGAACTTTGAACCTTATGTACCGAGCAAATGCAAGGCTTAGCAAATATAA  
TGCTAGTCCTAGATTACTTATTGATTTAAAAACAAAAAAGATTACTTAATTTTGATTTAAAAACAAAAATCG  
TAAATACAAAAACCAGTTAATGTTTTGTAGACCCTGGGAAAAAGAATTTTCAGCAAAGTACAAAAATTTAAAGCA  
TTCCTTTAATTTTTTAATCTTTACTGTGGAATAGCTCAAATGTCCATTCTGTTTTAAGTAACAGAATTGATAA  
CTGAGCAAGGAAACATGTTTTGGATTATAAAATCTTGCTTTAATAAAAAATTTCTTAAACAGTGAAA

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**FIGURE 3877**

CTCAGAACCATGCTGCATACTATCCTCCTAGCCAAATTGCTCGACTAAGACCAAGTCCTCGCTGGACTGCTCAGG  
GTGCCAGACCTCATCCATTCCAAAATAAGCCCAGTGCTATCCGCCCAGGTGCTCCTAGAGTACCATTTAGTACTA  
TGAGACCAGCTTCTTCACAGGTTCCACGGTATAAATATGCTGCGGGAGTTCGCAATCCTCAGCAACATCGTAATG  
CACAGCCACAAGTTACAATGCAACAGCTTGCTGTTTCATGTACAAGGTCAGGAACTTTGACTGCCTCCAGGTTGG  
CATCTGCCCCCTCCTCAAAGCAAAAGCAAATGTTAGGTGAACGGCTCTTTCCTCTTATTCAAGCCATGCACCCTA  
CTCTTGCTGGGAAAATCACTGGCATGTTGTTGGAGATTGATAATTCAGAACTTCITTTATATGCTCGAGTCTCCAG  
AGTCACTCCGTTCTAAGGTTGATGAAGCTGTAGCTGTACTACAAGCCCACCAAGCTAAAGAGGCTACCCAGAAAAG  
CAGTTAACAGTGCTACCGGTGTTCCAAC TGTTTAAAATTGATCAGAGACCACGAAAAGAAATTTGTGCTTCACCG  
AAGAAAAATATCTAAACATCGAGAACT

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**FIGURE 3878A**

GCCTTCGCCGCCGTTGGGGCTGGAAGTTCGCCAGGTCCGTGCCGGGCGAGAGAGATGCTGCCCGGCCCGCCTC  
GGCTTTGAGGCGAGAGAAGTGTCCCAGACCCATTTGCCTTGCTGACGGCGTCGAGCCCTGGCCAGACATGTCCA  
CAGGGTTCTCCTTCGGGTCCGGGACTCTGGGCTCCACCACCGTGGCCGCCGGCGGGACCAGCACAGGCGGGCCTT  
TCTCCTTCGGAACGGGAGCGTCTAGCAACCCTTCTGTGGGGCTCAATTTTGGAATCTTGGAAGTACTTCAACTC  
CAGCAACTACATCTGCTCCTTCAAGTGGTTTTGGAACCGGGCTCTTTGGATCTAAACCTGCCACTGGGTTCACTC  
TAGGAGGAACAAATACAGGAATAGCAACAATACTACAGGATTAACCTCTGGAACGCCAGCCACTACATCTG  
CAGCTACAACAGGCTTCAGTTTAGGATTCAATAAACCTGCAGCATCTGCCACACCAATTTGCTCTACCTATTACCT  
CTACCTCAGCTAGCGGTCTGACTCTTTCTGCTGCTCTGACATCAACTCCAGCAGCATCCACAGGATTTACTCTAA  
ATAATTTGGGTGGGACAACAGCCACAATACTACAATGCATCAACAGGCCTCTCTTTAGGGGGAGCCTTAGCTGGTT  
TGGGAGGTTCACTTTTCCAGAGTACAAACACAGGAACATCAGGACTTGGACAGAATGCTTTAGGGTTGACTTTGG  
GAACTACAGCAGCTACTTCAACTGCAGGCAATGAAGGCCTTGGTGGTATAGATTTAGTAGCTCCTCAGATAAAA  
AGAGTGATAAAACGGGAACAAGACCAGAGGATAGTAAAGCTCTGAAGGATGAAAATCTACCTCCTGTCATCTGCC  
AGGATGTTGAAAATCTCCAGAAATTTGTGAAGGAGCAGAAACAAGTTCAAGAAGAAATAGTAGAATGTCTTCAA  
AAGCAATGCTTAAGGTACAAGAAGATATTAAAGCTCTGAAGCAGCTCCTGTCTGGTGGCTGCCAATGGAATACAGA  
GAAACACTCTCAACATTGACAAATTTGAAAATGAAAAGTCTCAGGAGTTGAAGAATGCTGAAATAGCTTTAAGAA  
CCCAGAAGACACCACCTGGACTTCAACATGAATATGCAGCTCCTGCTGACTACTTCAGAATCTTGGTTCAGCAAT  
TTGAGGTACAGCTTCAGCAGTACAGGCAGCAGATTGAAGAACTAGAAAACCATCTTGCCACTCAAGCAAATAATT  
CACATATAACCCCTCAAGATTTGTCAATGGCTATGCAGAAAATTTATCAAACATTTGTAGCTTTAGCGGCACAAC  
TTCAGTCTATTTCATGAAAATGTAAAGGTTCTGAAAGAACAGTACCTTGGCTACAGGAAAATGTTCTTGGGAGATG  
CTGTTGATGTGTTTGAACAAGGCGAGCAGAAAGCCAAGAAGTGGCAGAACACACCCAGAGTTACTACTGGACCCA  
CTCCTTTCAGCACCATGCCAAACGCAGCAGCCGTTGCCATGGCTGCAACACTTACACAGCAGCAACAGCCTGCTA  
CAGGCTGTAACGCATTCAAGTTATTAGCTTCTTACTGTTCCAATGCAGAACATTTATGTGCGTTTTTATAAGTCTT  
CCATTTGTGTGAGCACTGAAGAAATTTCTATGAGTAGCTGTTCCAATACAATCTAAAATGTGATGGACACGATT  
ATAAACATACCTGATAAAAAAGGCAGGGTAGTCTTAGCAATAATTATACATCAATTAGATATTGAATATTGTGAA  
TCTACTTAATGTTATTTGCTGTAATGCTATAAATGCCCTTTAGAACATGGTGTTCCTAGTGAATTACATTTAA  
GAATAACATTAGATTCTGAAATCATGACTGTACCATTTATTGTTTTAAAGTCAGAGATCATCCATCCATCTTTG  
AATTTTTCATATATGATAGTGGTGGTGCATTCTCATTTTCTCATACATAGTGATTACAAAGTACCCACAT  
TCAGGATGAAGTATGCTTTTATTGACTGAAGGTATGTTGAAGATCAATAGGCTTGTGTTGATGTATGTTGACTGT  
AAACAGAATACAAGCCCTCTAAACCAAATTTTGAAGATGATACATGCTAGAATTGTACCTTTCCAAGGTGAACAG  
AACAGCAAGAGCAGGAAAAAGATGTTTTGAGATGTGGATTGCACATTAAGGAGCAACTGGGAAGTTGAACAGATG  
AAAATAATTGGTGACATGGAAAGCAGATTGTTTTATTCTTGGTTTAGTTACACTTCTAATTAGAGAAACATTTT  
TTGTGGTCATTCTACAGTGTGTTTTATTGGTCCGTGTCTTTCCGAGGTTAATAGTTATCTTAATCCTGCCATCCC  
TTTTGTCAGGTTTGAAGCTTGACATGGAAAAATAGTCTTAATCGATATTGATTTTTTTATTTAATCATTACATAA  
ATTTCTTAGTAATGCTTACTATTCAATAGCATGTGTCTTTCTGAGAGTTCCATATAGTCCAGTAGTACATTATAA  
TACACACAAATTAATACATATTTAGATTGCATTCAAGCTACCTATACTAGGGAAGCATTCTCTGGTTTTCACTAT  
TGGCAGTTTTAAAAATTTGTTCTTCACATTTGGAGATGACAGAATTGACTTGCCATAAGTAAAGGGTTGATGATAG  
ATTTATGCCAAATCCTCCATATCCCGTGGCTGGACCCATGTGAATAGTGGCTCGCACGAGCACTGTCTGGTAGCT  
CTCTAGCTGGCTGGAGTGTAGGATTGCGTTGTTAAGTTATGGAGGGAAAAAGTCATTATGGGATTGATTCCTTTG  
AGGATTGATATTTCTTCTTAAAGGATTCAATCCCATAAATTATGACCATCAGCTCTCATGATTACCTAACCAGTT  
AATCAAACCAACCATAGTACTAGTTTACTTTTTAGAGCCAGTATTAATCCTAAAGTAGATAAGTGATAGATTGGT  
TAAGTGTTCTTTAAACATAGTGAATTTCCATTCTATTAAATAGAAGTTGAGAAATGTCAGTTATATAAAAAAGTTA  
TGTGTGAAGTGAATATATTCTATGATAAATACCTAACTTGAAGCAAAATCTCCTGTCAAGGGTTTTGTGTGTGTG  
TGTGTGTTTTAACTTTCTTATCTATAGATTATTATTTTGAAGAAATTCATAGGTTTTCACTTATACATTTTGAAGCTT  
GTGGACATATGGAGATGTGTGTTCAATCTCTAAATGAGTGCCTACTATGTGCTGGGCTCGAGGAATACAAAAGGTA  
GACAATATAGATTTTGTCTTTGCCCTCTGTGGTGGTTGACAATGTTAGCTTAATCTGGAGTATTCTTGAGGAGCC  
TTTTGCTCATAGGCTTTAATTTGTCTGTGACTTTTGCCAGGCTTTGGGGAAATTGACTGCCTTCACTCTTCCCT  
GAAACTTTGAAGTCCACATAAGGGCTTTCTCATCAGATGGCAGAAATTATAATTTATTAACCTAAACAACCTTAC  
AGTGTTTTCGCTTTGAATTGTATGAATCTTAGAACTGAGAAGCTAAACAACAGTGATAACAATTTTACATTATC

**FIGURE 3878B**

TCTTCCTTTCTCCTTTTGTCTTCTCTAAAGGCTCTCCAGGCCTTCCAGCTCAAATTTTCGTTATTTTTAGTCATGT  
CATTCTGATGTGAGATTCTGAGCTCTGTTAGATACATTTAGAAATGTCCCTATTTATCAAATGGTGTGTTGTAC  
CCCATAAAGTTATCCCTTATGCCCTGTGACTTCTGTGAAATCTTTGTTTTTAAGTGCCAGTAACAAATTTTAGACC  
ATCTAGATGAGGGTAGAGAGAGCTTATGCATTGTTTTTATACATCACTGTTGATCTATACAAGATTGAGTTATC  
AGAAGGGTTTTGCTTTTATTGTCATATGAAATTTTTATTAACATGAATATGGGCACAGAGCAAATAGCTTCTTAG  
ACTGCTGCCTTCTGAAGGTGGCTTCTGTATCTTTCTCAGAGGAGGAGGAATAGACTTAAACGACTTCTTTGTCCT  
CCTTCAATTTTTTTTTTAATGAAAAAGTATACTAGGGCTTAGGCATGTGTGATTACAGTTATTTGTTCTGAAGG  
CTGCAGAGAATTGAAAAATCCAGCAGGCTATTTGTGTATGAAATCATGAGCATCGATAACGTGGATAACGTAGTTC  
CATGTTGGCAGAACTTGACACTTGTCTATAAGTGCTTCCCAAGCCTCTGAAAAACTGAAGACATTTACATTAGG  
CTTTTCAGTATAATTTTAATTTAGGATAGGTTTTTTTAGCAATGTATCTGGGATTGAGTTTTGCTATTGTGTTTTG  
ACACTTTAAGAGTTCCTTGATGTTTACATAATAAGACTTCTTATGTGACTTAGCTGCTGTTTTAAGGAGAGCCAA  
GACGTTTTGTAGGAATTCCTAATTTTTAGCCTTAGTGAGGTTTTGGACATTTAAGGTGTAGTGTTAAATAGGAAA  
CATTAAGTATTTTCATCTTAGTTTTCTGTGGTTTTGTGATTTTGTGTAATTTAATAACCAAAGGAACATTCCCCAT  
TAAATCAGTAAGAGTAAAAATTTTTCAAACCTGGGGAAAACGCATTTTAGGTTTTTTAAGAAAAAATTATTTTTAAA  
TGTGACTTAGAAATAACCATACTAATTACATTAGGCATTGGGGTGATCATGGAAAATTATAAAATATTTTTAGC  
ACTTTAGTCCTTTTTCTGTTAATGCAGTTTTACTTTTAAGAAAAGTAAATTTATTCTGGAAAAATGAATTACAG  
CGCTAAACCTGGTTTTGTGTGTGTGAATATATTATATGGTAACTTTTGTAATGTTACTCTACATGAAGATTT  
CACTTTGGCCAGTCATTGGTATATATCACTACAACTTAATTTTATTTATGGAAATAAGAACCCTCTCATTGGATG  
ACTATTCAAATTTCAAAGCAGACTTCTTGAATTGTTTACGTAACCTTTTGCTGAAGGATTTAGACTGCTTTCTAA  
TAGTGAAACTAATATATATGTTGGCCAGAGTGTAATATATGCTAATACTTTGGCATGGGAGATATTTATCATGAG  
TTTTTACTATTAAAAATGTTATACATTTGCCTACGAGTTTTATAAATGATGTTGCCTTCAGAATTTGTGTGAAG  
GTACAAAACTAAAAATATCATGTATCTGATGTGCAATGGAAAGTCTTGTCACTATTAGATATGAGTTCTTGATTA  
TATTTCTGAATATTGATGATTAGAAAAATCTTATGTTCTGTGCTCTTAACAACAGACCCACACACAACAAAAAGC  
ATGCTATTTGAGTAACTCTTACGACTTACAAGGCTGAGGGCTGTGGTGTGCATTATTTCTTTAGGGTCTTCCACCA  
GCAGTGCCCTCCTATTAACTGTGACAAACAAGTCTCTCAATGTTAAAGAAGTGGACATGTGTTTTTTATGTTTTT  
TGTTAGGAATCAGAAAGTATAATAATATGCTTGGTTTTCTTTTTCTATAGTAACATTTTACAAAAGAGCTGCTAG  
GCAGGTATTTTATTCTCAAAGTGATCTCAAACCTGGATGTAAATTTTTAAATTTATTTTTTAAATAGTAGTATAAGA  
ATTCTGCTGCTATTAGTTATTGTTTGTGTTTTCTGGGTAGAAAGCTATTCGAAAAGTCCAGTTTCTGTCCAGTGT  
AGCAAAATGTAGTTCCTCGGTTGTTTTCTTTAAATGCTTTATAATTTTACACTACCTTTTTAATATACAAACCT  
CATTCTTCATTGGATAACTTGAAGGCTTTGATTTCTTTAAAAATTTAAATTTTAGTGTGTATATTACTTTGACAG  
TTCCCTCATCTTTGAGATGCACCTGATCACTGTGCTTGAAAAAGACAATACTGAAGATTGTACTATGAAGTTTATT  
GAAATAATTTTCATAAATTTATTTATCCAAATGAGAGATTTTTAGATTTTGTATTCTGCTTAGTTTTAAAAAAA  
AAATAGTAGTTTAAAGAGAGGCTAGTAAGTTTGATGCTATTCTTGCCAAACAAACTCAGCCAAAATCTTTAAAG  
TAACAAGAGGGGAAAAGGATGACTAATCGTTCTGCTTCTGAGTACATTTTCCAAAACGTTGAAAGAAACTTCTGA  
ATTGAAATCTTGAATGTATTGAATCTGTCAAGGTACACAGCGGTGCCTTTGTAAATGTTTACTTATTATTAAT  
CAGGTGATAAGTGGTGTAAATGTAGCAGAGCTTAAGAATAGAACTCAATTATCACTTTTTGTGAACAAGTTGGAAT  
TGTCAGTTACTGTGTAATTGATTTGCTTTTACAATGAACAATAAAATTTAATAAAAT

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**FIGURE 3879**

MSTGFSFGSGTLGSTTVAAGGTSTGGVFSFGTGASSNPSVGLNFGNLGSTSTPATTSSAPSSGFGTGLEFGSKPATG  
FTLGGTNTGIATTTTGLTLGTPATTSAATTGFSLGFNKPAASATPFALPITSTSASGLTLSSALTSTPAASTGF  
TLNNLGGTTATTTTASTGLSLGGALAGLGGSLLFQSTNTGTSGLGQNALGLTLGTTAATSTAGNEGLGGIDFSSSS  
DKKSDKTGTRPEDSKALKDENLPPVICQDVENLQKFVKEQKQVQEEISRMSSKAMLKVQEDIKALKQLLSLAANG  
IQRNTLNIDKLKIETAQELKNAEIALRTQKTPPGLQHEYAAPADYFRILVQQFEVQLQQYRQQIEELENHLLATQA  
NNSHITPQDLISMAMQKIYQTFVALAAQLQSIHENVKVLKEQYLG YRKMFLGDAVDVFETRRAEAKKWQNTPRVTT  
GPTPFSTMPNAAAVAMAATLTQQQPATGLNAFKL

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**FIGURE 3880**

ATGGCTGTTGGCAAGAACAACGCCTTACGAAAGGAGGCCAAAAGGGAGCCAAGAAGAAAGTGGTTGATCCATTT  
TCTAAGAAAGAGTGGTATGATGTGAAAGCACCTTCTGTGTTCAATATAAGGAATATTGGAAAGATGCTAGTCACC  
AGGACCCAAGGAAACAAAATTGCATCTGATGGCCTCAAGGGTCATGTGTTTGAACACCAACAGGTCCGCCAAATC  
CGGAAGAATATGATGGAAATCAAGACCCGGGAGGTGCAGAAAAATGACTTGAAAGAAGTGGTCAATAAATTGATT  
CCAGACAGCATTGGAAAAGACATAGAAAAGACTTGCCAATCCATTTATCCTCTCCATGATGTCTTCGTTAGAAAA  
GTAAAAATGCTGAAGAAGCCCAAGTTTGAATTGGGAAAACATCATGGAGCTTCATGGTGAAGGCAGTAGTTCTGGA  
AAAGCCACTGGGAGCAAGACAGGTGCTAAAGTTGAATGA

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**FIGURE 3881A**

GCGGCCGCGGCGGCGGGACCATGGAGCTCAGAGCGCAGCCCCGCGCGCGGCGGGACCGCGGACCGTTTTA  
GTTTTGATTGCTGTAACTACTACTGATAACTGAGCCAAAGTGGTGATGCTACTTGAGGGGAATTTCTGCAACCC  
ATAGTCAACGATTACATGATTGTGAACCATGCCTTTAGTGAAGAGGAACATTGAGCCCCGCACTTGTGCCGGGG  
AGCTCTGCCTGAAGGGATTACCAGCGAAGCTTGAATGTGTAACCAATAGTACTCTTGCCGCTATCATACGCCAGCT  
GAGCAGTCTGAGCAACATGCTGAAGACATATTTGGTGAGTTGTTTAAATGAGGCTAACAACCTTCTACATCAGAGC  
AAATTCTCTTCAAGACAGAATTGATCGCCTTGCTGTCAAAGTCACCCAGCTGGATTCAACAGTGGAAGAGGTCTC  
ACTACAGGATATCAACATGAAAAAGCTTTCAAAGTTCCACAGTCCAAGACCAGCAAGTGGTTTCAAAGAACAG  
CATTCTTAATCCTGTTGCTGATATTTACAACCAGAGTGATAAGCCACCGCCTCTGAACATCCTGACACCATACAG  
AGATGACAAGAAGGATGGGCTGAAGTTCTATACTGATCCTTCCTATTTCTTTGACCTCTGGAAGAAAAAATGCT  
ACAGGACACAGAAGACAAAAGGAAAGAGAAAAGGCGTCAAAGGAGCAAAAGCGTATAGATGGCACCACCCGTGA  
GGTGAAGAGGTTAGAAAAGCCAGAAACAGGCGCCAGGAGTGGAAATATGATGGCATATGACAAAAGAGCTTAGACC  
CGACAACAGGTTGTCTCAGAGTGTGTACCATGGAGCGTCTCCGAGGGATCCCTGTCCCCAGATACTAGGTACACA  
TGCATCGGACGTTACGGATTACTCTTACCCGCTACTCCCAACCATTTCTCTGCACCCCCAGCCTGTGACCCCTTC  
CTATGCAGCTGGTGACGTGCCACCACACGGGCTGCAAGCCAGGCTGCGGAGCATGAGTACCGGCCCCCATCTGC  
CTCGGCGAGGCACATGGCCCTCAACAGACCTCAGCAGCCGCCCCCCCCGCTCCCCCTCAGGCCCCAGAGGGGTC  
CCAGGCTCTGCACCGATGGCTCCAGCAGACTACGGGATGCTCCAGCGCAGATAATTGAGTATTACAACCCATC  
CGGACCCTCTCCGCCACCTCCTCCTGTGATTCCTCAGCACAACCTGCCTTCGTCAGCCCTCTCCAGATGCC  
CATGCAGCCCCGTTCCCTGCATCAGCCAGCTCCACGCACGCAGCTCCTCCTACCCACCTCCACCGGGCTCCT  
GGTCACAGCCCCGCCACCCCGGGCCACCCTCCCCCGCCAGGCCCTCCTGGTCCCGGGTCTTCTCTTTGCTC  
CTCCCCAATGCATGGCCCCCAGTAGCTGAGGCGAAGCGGCAAGAGCCTGCACAGCCACCAATCAGTGATGCTCG  
AAGCGACCTCCTCGCTGCTATTTCGAATGGGAATTCAACTGAAAAAGGTGCAGGAGCAGCGGGAGCAGGAGGCCAA  
GCGGGAGCCAGTGGGGAATGACGTGGCCACGATCCTGTCCCGGCGCATTGCCGTGGAGTACAGCGACTCTGACGA  
CGACTCAGAGTTGACAGAGAAGCACTGGTCCGACTGAGCAAAAGGCCGCGGAGAGGCCGCGTGTGGGAGCGTGT  
GAAGATTTAAGTGGTCTCTACCCCCAAATAGTGGTATTCTAATCCCGTAGCATAGCACCTTTTGTATAAACAA  
GTGATATTGCTTCTGCACATCCAAAAATTCTGGGTCTTTTTCAGTATTTACTGTGTAATACTTAAGTGCCACTAAA  
CATAGCAAATTGTGCTGCACATGAGGAAATAGGCTGTCACTATCACATTGTCTGAAACAGCATCTGCTTCCCT  
CTTGGCCATGAGAGTATTTAGTGCAGTTTGGGTTTACTCTTACTGATCAATATAACTCTGCAGACTTGCTGTGTG  
TTTGTGAAGCTGCCTGGTGTAGGTCTCTGCAAGACTAATGACTATGTCAGAGTGATGTCTTCAACCAAGTAAGT  
GATATTGTTTACCGCTTTGGTTTTCTTTTGTTTTTTAAAGGATGTGTTTCTGAATAAGTTGGTTTTAGAGG  
GAAAGGTTCAACAAACAGGGAGAATCCAGTGTTTTCTGCTTTTCAGTTTCTTGGCTTGGTAGCCTCTGAGTGAATCT  
GATGCTCTGCTGAATAATTTTATTACCTCTGCACATGCCTGTCAAATATGAAATTGGAAGGGCCCTTTTCAGGCT  
GGGTTCCCTGTGGGCATTTGCTTAGTAAATGCCIGTTGATGGTTTTTGCAAGAGAATTCAGCAGCTCAACAGTAA  
TGAAAGTGAAGAACAGAGTCCATTTCTTCTGGGGCCATTGGGGATGACACTCAAGATACTTGCCAGTCTCTC  
CAGTGTGGGCACCAGCCGGCCAGAACAGATGCGAGCAGTCCATGACTCTGGGAGCTACACCGCTGAGCTGGGCAG  
AGCTGCGGCACAGGGCCTGGGCTGCAAAGGAGCCCTGCTCCTTTAGTTTCTGACACCTGTGTCTGAGTGAGCC  
GCAGGAGTTCTTAGCTCCTCAGCGAGCAACAGAGAGCACTTTAGATGGCACCTTTCACCACTTGGTCAGAATTT  
AAAAGCTTAGGTTTAGGTGAAAGTAGATATTGACAGCTATTACCTTTCACGGTGCTGGGGCCAGATTAGGGATC  
ACTCCCGTGAGGAGGGCCTTACCCCTGTCTAGAAAGCACATGGTTGTCTCCTCTGTTGTTGGCACATTAAATGATA  
AAAAGCACCTCATGAGATTCCTTTGATCAGCCCTGCAGCTGTAGTACAGTGCTGTGCCCTCACCTCCACCTTCC  
TGTTGTTCCACGTGGGCAATACCAGGGACCCATGGGAAACTCAAGAATGACAGCTTCTATATTTGTAAATCT  
GGATGAAAGATAACTGTGTTGAACAAACAGGTGCTCCAGGCTTTGATTATAGATACGACTTCAAAAATATGCTAA  
GACGCTTGACTTATTAAGGACTTTAACCTACTCAACAGTATTTTCATATCCATTGTGGTTAGTTACTCAGTTATGT  
TGAGAAGAATCTGGAGCTAAAAGCAGAGATGTTTGGGTGACGGTAGGAATGTGAGCAGGATGGTGATGGGGGTT  
TTTGTTAAATGCATCTGAGCAAGTCAGCCAGCCCCGAAGTCCCCTCAGTGTGTGTCTCGAGTGGCTACCTGT  
TGGGCTTGTGGGCAGTGATTGTACAGAGCCTGTCCATTGGGTGCAGTCATGTAGATCTGAAGCCCTGAAAAGCCT  
CCTCTTCAGCGTCTTTTCTAGAGCTGGTCACCACTAGGCTGTCACTATAAATTCCTTGAATATAAGTAACAGTT  
ATTAATGAACCTTCAAATTTCTAATTTCTCTCTCTCTCTTTTTTTTTTTTTTTGTTGTTGTTAAAAAGGCCTA

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**FIGURE 3881B**

CTACATTGGCGCTATTCTTAGGACTTCTGCAACTTTTAAAGTCTTACTTGTCTTTCTTGTTGCTTTTGTATTAGG  
AGTTCCCCGTGTGGGTCTAGAACTCCCCTTTGGTAATGCTTCTTTGTTTTTTATGGCCCTTCTGTTCTCAGGAT  
GGAGAGAACACAGAAGCTACTATCCATGTCAGGATTTATCTATTTATATCTTATTACAATAAAATTAGTGGCAC  
TTTATTCATAAATATTCATGAGCCTGTTAATTGTTAGTTGCTTCTCCTGTAGCTGAATCAACAAGTTATTTTCAAC  
TCAATTTTATGACTTGCGAAAAAGCTTTTGCCCTGTTGTGTACCATAACATTTAAAAGAATGGAAAATGACTGAA  
ATCCAATTTAGATTATTTTATAGAGTATTTTCCAGCAAATTCATTTTATTCTGAAATTTAAATCCAGATCTTTTC  
TAATATGGTATTACAATGAAAAGAATAAAGAGAAGATTTGAATTTTCAGTTTCATTTTCAAAAACATTTTACCAA  
AACAAATGGAGAAGAAACATCCAAAAGCACATTTTCAATTTCTCCAAACTTTGTGTTTTAAATTATAGTTATAAATT  
GTAAGGTAATTTTAAATTGTCCCTCGTATTATTTCTCCACGTCTGTTTTAGTTTAAATGTCTCCTAAGCTTTTCTC  
TCATAGCGTAGACCTAGGGAAGGGATGGGAAGATTGCCAGTCCCCGATGGCTGCGCACACAGGAGGCGGCGGAG  
CACAAGGCAAGTGAGTTTGCCTGTGAGCCCCAGACCGTAAGCTTGGCTACACTGATGTTTTCTTTACTAAGGA  
TACTATTCAAAAATTAACATTTTCATCTCAGTAAGTTTTAGAACATCAAAATGTTTTCTGAGCTCCAAGTGGCT  
AGGTTGTAAAAGTTTTATAATAATTTGCAATTAATAATACATGATACATATTAATCCATTAAAGACTAGTGGGAAT  
GTATCAGCCAGAGTAGCAAGTAATTTTTGTTTTATAAATCATAGTATCTGTCTCCTTGCAGTATTACCAATGCTG  
TTGTAAATTGAATTTAAAGTGGTATTAAAAAACTGTTAAACAATTTTATCTGTTTGTATATCTTACTATAGA  
TTATGTACAAGTAACATCTAAATAAAATTACACTTTTAACCT



MPLIVKRNI EPHRLCRGALPEGITSELECVTNSTLAAIIRQLSSLSKHAEDIFGELFNEANNFYIRANSLQDRIDR  
 LAVKVTQLDSTVEEVS LQDINMKKAFKSSSTVQDQQVSKNSIPNPVADIYNQSDKPPPLNILTPYRDDKKDGLKE  
 YTDPSYFFDLWKEKMLQDTEDKRKEKRKQEQKRIDGTTREVKKVRKARNRRQEWNNMAYDKELRPNRLSQSVY  
 HGASSEGLSPDTRSHASDVTDYSYPATPNHSLHPQVPTPSYAAGDVPHPGFPASQAAEHEYRPPSASARHMALNR  
 PQQPPPPPPPPQAPEGSQASAPMAPADYGMLPAQII EYYNP SGPPPPPPPPVIPSQATAFVSP LQMFMQPPFPASA  
 SSTHAAPHPHPSTGLLVTA P P P P P P P P P P P P G P G S S L S S S P M H G P P V A E A K R Q E P A Q P P I S D A R S D L L A A I R M  
 GIQLKKVQEQREQEAKREPVGNDVATILSRRIAVEYSDSDDSEFDENDWSD

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**FIGURE 3883**

ATGCGCGATCTCCCGGAGCATGCGCAGCAGCGGCGCCGACGCGGGGCGGTGCCTGGTGACCGCGCGCGCTCCCGG  
AAGTGTGCCGGCGTCGCGCGAAGGTTTCAGCAGGGAGCCGTGGGCGGGCGCGCCGGTTCCCGGCACGTGTCTCGG  
CACGTGGCAGCGCGCCTGGCCCTGGGCTTGGAGGCGCCGGCGCCCTGGATCCGCCGGCCGTGGTCGCCGAGTCGG  
TGTCGTCTTTGACCATCGCCGACGCGTTCATTGCAGCCGGCGAGAGCTCAGCTCCGACCCCGCCGCGCCCCGCGC  
TTCCCAGGAGGTTTCATCTGCTCCTTCCCTGACTGCAGCGCCAATTACAGCAAAGCCTGGAAGCTTGACGCGCACC  
TGTGCAAGCACACGGGGGAGAGACCATTGTGTTGTGACTATGAAGGGTGTGGCAAGGCCTTCATCAGGGACTACC  
ATCTGAGCCGCCACATTCTGACTCACACAGGAGAAAAGCCGTTTGTGTTGTGTCAGCCAATGGCTGTGATCAAAAAAT  
TCAACACAAAATCAAACCTGAAGAAACATTTTGAACGCAAACATGAAAATCAACAAAAACAATATATATGCAAGTT  
TTGAAGACTGTAAGAAGACCTTTAAGAAACATCAGCAGCTGAAAATCCATCAGTGCCAGCATACCAATGAACCTC  
TATTCAAGCTATGTATGTCAAAAAGGATGTTCCCTTTGTGGCAAAAACATGGACGGAACCTCTGAAACATGTGAGA  
GAAACCCATAAAGAGGAAATACTATGTGAAGTATGCCGGAACATTTAAACGCAAAGATTACCTTAAGCAACAC  
ATGAAAACATCATGCCCCAGAAAGGGATGTATGTCGCTGTCCAAGAGAAGGCTGTGGAAGAACCTATACAACTGTG  
TTAATCTCCAAAGCCATATCCTCTCCTTCCATGAGGAAAGCCGCCCTTTGTGTGTGAACATGCTGGCTGTGGC  
AAAACATTTGCAATGAAACAAAGTCTCACTAGGCATGCTGTTGTACATGATCCTGACAAGAAGAAAATGAAGCTC  
AAAGTCAAAAATCTCGTGAAAACGGAGTTTGGCCTCTCATCTCAGTGGATATATCCCTCCCAAAAGGAAACAA  
GGGCAAGGCTTATCTTTGTGTCAAAACGGAGAGTCAACCAACTGTGTGGAAGACAAGATGCTCTCGACAGTTGCA  
GTACTTACCCTTGGCTAAGAACTGCACTGCTTTGTTTAAAGGACTGCAGACCAAGGAGCGAGCTTTCTCTCAGAG  
CATGCTTTTCTTTATTAATAATTACTGATGCAG

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**FIGURE 3884**

GGGGGGAAACGGAAGTGAGCGGCGGGGTCGACTGACGGTAACGGGGCAGAGAGGCTGTTTCGCAGAGCTGCGGAAG  
ATGAATGCCAGAGGACTTGGATCTGAGCTAAAGGACAGTATTCCAGTTACTGAACTTTCAGCAAGTGGACCTTTT  
GAAAGTCATGATCTTCTTCGGAAAGGTTTTTCTGTGTGAAAAATGAACTTTTGCCTAGTCATCCCCTTGAATTA  
TCAGAAAAAAATTTCCAGCTCAACCAAGATAAAATGAATTTTTCCACACTGAGAAACATTTCAGGGTCTATTTGCT  
CCGCTAAAATTACAGATGGAATTCAAGGCAGTGCAGCAGGTTTCAGCGTCTTCCATTTCTTTCAAGCTCAAATCTT  
TCACTGGATGTTTTGAGGGGTAATGATGAGACTATTGGATTTGAGGATAATTCTTAATGATCCATCACAAAGCGAA  
GTCATGGGAGAGCCACACTTGATGGTGGAATATAAACTTGGTTTACTGTAATAGTGTGCTGTTTCATGGAAACCGA  
GGGCTGCATCTTGTATATAGTCATCTTTGTACTGTAATTTGATGTACACAACATTAAAAAGTACTGACACCTGAGA  
ATTTCTGCTCAAGTAGTATCAGTGATCATTTAAAAATTTGGAGGGGTCITTTGGTTTACAGCCATGTGACAATTAAA  
AGCACTAAAGGGAGATCATGTTAAAGCTCTTAATTTATATTAAACAGTAGCCTTTGTCTTTAAAAAAGTTGTG  
CTCATGAATATTATAAAATGATCTACAGGTTTCAATTC AACCTGTTTCTAGGTTTTTTTGTAATTTAGTTTTGA  
TTAAGCATTATAAGCATTGAGTCTATAAACTTTATAGTAGCATCTTTCAGAATAAACATTTTTAATTGATTTC  
GTGGCAACTCTCAAATTGATTACAATATGAGATATATCAGTGTCGTCATTAACTCATAAGAATAATATTAC  
TGTGTCAGTGCTATTTTAGGATTATAGTTATTGTTTGATTATTTTCAGGTTGAAAAGTAGAAGTTCCAAGGTTTTG  
ATTTTGGTCTGGTCTTTAAGTGAAAAATTAAAGCAACCAGTAGATGTAGGTTAACTTTTACTTCATAGACTTAA  
TATGTGATTAATATATTGCCAAGCAACACTGTTAAAGAAAAGTAAACTCATTTTTTCTTGTCTTAATTTATAT  
ATTACAAGATACTGTAAGGTATTCTTTATGAAGTTGATATATAAAATTTACATTTTGAACATTAGTGAATGG  
ATCATCTTTTACAATTAAAAGTATATTTTGATTATCAGTTTCTTAGCAAAAAAAAAAAAAAAAAAAAAAAAAAA  
AA

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**FIGURE 3885**

MNARGLGSELKDSIPVTELSASGPFESHDLRKGFSCVKNELLPSHPLELSEKNFQLNQDKMNFSTLRNIQGLFA  
PLKLQMEFKAVQQVQRLPFLSSSNLSLDVLRGNDETIGFEDI LN DPSQSEVMGEPHLMVEYKLGLL

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**FIGURE 3886**

ACACTGATGATGTTTTAGCCAGGGTGCCGTTCCCTTTTCACTATTGTGCCATTCTCTGTTCTACGGTCCATGTTG  
TCAAAAGTGGTTCGTTTCGACTGAACAAGGTACCCTGTTTGCTTGTATTGCTTTCTTAGAAACACTTGGAGGAGTC  
ACTGCAGTTTCTACTTTTAATGGAATTTACTCAGCCACTGTTGCTTGGTACCCTGGCTTCACCTTCCTGCTGTCT  
GCTGGTCTGTTACTACTTCCAGCCATCAGTCTATGTGTTGTCAAGTGTACCAGCTGGAATGAGGGAAGCTATGAA  
CTTCTTATACAAGAAGAATCCAGTGAAGATGCTTCAGACAGAGCCTGTTAAGCTGCTATTGATAGTCGGAGCTTA  
TATACTGTGACTTCTGAAGACTATACATGAATTCCACAATCAGTGCTTTGTTGATACAAAATCCTTAAAAGGGAG  
GCACTTTAAAGAATATGTATTTTCACTTTTCTTAATATGTTTCATCGGTGACAGGCATGATAATATTTCTATAT  
GTAATGGGTAATTGGGAAAAAATAGATGATAAATAAAATTGCTCTAAAGAAGTT

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**FIGURE 3887**

GAGACAGCGCCGGGGCAAGTGAGAGCCGGACGGGCACTGGGCGACTCTGTGCCTCGCTGAGGAAAAATAACTAAA  
CATGGGCAAAGGAGATCCTAAGAAGCCGAGAGGCAAAATGTCATCATATGCATTTTTTGTGCAAACCTGTGCGGA  
GGAGCATAAGAAGAAGCACCCAGATGCTTCAGTCAACTTCTCAGAGTTTTCTAAGAAGTGCTCAGAGAGGTGGAA  
GACCATGTCTGCTAAAGAGAAAGGAAAATTTGAAGATATGGCAAAGGCGGACAAGGCCCGTTATGAAAGAGAAAT  
GAAAACCTATATCCCTCCCAAAGGGGAGACAAAAAGAAGTTCAAGGATCCCAATGCACCCAAGAGGCCTCCTTC  
GGCCTTCTTCTCTTCTGTCTGTAGTATCGCCCAAAAATCAAAGGAGAACATCCTGGCCTGTCCATTGGTGATGT  
TGCGAAGAAACTGGGAGAGATGTGGAATAACACTGCTGCAGATGACAAGCAGCCTTATGAAAAGAAGGCTGCGAA  
GCTGAAGGAAAAATACGAAAAGGATATTGCTGCATATCGAGCTAAAGGAAAGCCTGATGCAGCAAAAAAGGGAGT  
TGTC AAGGCTGAAAAAGCAAGAAAAAGAAGGAAGAGGAGGAAGATGAGGAAGATGAAGAGGATGAGGAGGAGGA  
GGAAGATGAAGAAGATGAAGATGAAGAAGAAGATGATGATGATGAATTAAGTTGGTTCTAGCGCAGTTTTTTTTTC  
TTGTCTATAAAGCATTTAACCCCCCTGTACACAACCTCACTCCTTTTAAAGAAAAAAATTGAAATGTAAGGCTGTG  
TAAGATTTGTTTTTAACTGTACAGTGTCTTTTTTTGTATAGTTAACACACTACCGAATGTGTCTTTAGATAGCC  
CTGTCCIGGTGGTATTTTCAATAGCCACTAACCTTGCTGGTACAGTATGGGGGTTGTAAATTGGCATGGAAATT  
TAAAGCAGGTTCTTGTGGTGCACAGCACAAATTAGTTATATATGGGGATGGTAGTTTTTTCATCTTCAGTTGTC  
TCTGATGCAGCTTATACGAAATAATTGTTGTTCTGTTAACTGAATACCACTCTGTAATTGCAAAAAAAAAAAAAAG  
TTGCAGCTGTTTTGTTGACATTCTGAATGCTTCTAAGTAAATACAATTTTTTTTTATTAAAAAAAAAAAAAAAAAA  
AAAAAA

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**FIGURE 3888**

MGKGDPPKPRGKMSSYAFFVQTCREEHKKKHPDASVNFSEFSKKCSERWKTMSAKEKGKFEDMAKADKARYEREM  
KTYIPPKGETKKKFKDPNAPKRPPSAFFLFCSEYRPIKGEHPGLSIGDVAKKLGEMWNNTAADDKQPYEKKA  
LKEYEKDIAAYRAKGPDAAKKGVVKAESKKKKEE

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**FIGURE 3889**

CGGAGGTGAGGTTTGTTACCGCGATTCTGAGAGGTGGGCTTTTAGTCCCTCCAGACCTCGGCTTTAGTGCTGTCT  
CCGCTTTTCTTTACCTTCACAGAGGTTTCGTGTCTTCTTAAAGAAGGTTTATTGGGAGGTAAAGGTCAATGCG  
TAGGGGTAGAGTAAGATGCTCTTATGGTGAAATTGAAGGTAAATTCTTGGGACCTAGAGAAGAAGTAACGAGTGAG  
CCACGCTGTAAAAAATTGAAGTCAACCACAGAGTCGTATGTTTTTCACAATCATAGTAATGCTGATTTTACAGA  
ATCCAAGAGAAAACCTGGAAATGATTGGGTCCCTGTGACCATCATTGATGTCAGAGGACATAGTTATTTGCAGGAG  
AACAAAATCAA~~AA~~ACTACAGATTTGCATAGACCTTTGCATGATGAGATGCCTGGTAATAGACCAGATGTTATTGAA  
TCCATTGATTCACAGGTTTTACAGGAAGCAGTCCTCCATTAGTATCCGCAGACGATGAGATATATAGCACAAAGT  
AAAGCATTTATAGGACCCATTTACAAACCCCTGAGAAAAAGAAACGTAATGAAGGGAGGAATGAGGCACATGTT  
CTAAATGGTATAAATGACAGAGGAGGACAAAAAGAGAAACAGAAATTTAACTCTGAAAAATCAGAGATTGACAAAT  
GAATTATTCCAGTTTACAAAGAAATTGAAGAGCTTGAAAAGGAAAAAGATGGTTTTGAGAACAGTTGTAAAGAA  
TCTGAACCTTCTCAGGAACAATTTGTTCCATTTTATGAGGGTCATAATAATGGTCTCTTAAAAACCTGATGAAGAA  
AAGAAAGATCTTAGTAATAAAGCTATGCCATCACATTGTGATTATCAGCAGAACTTGGGGAATGAGCCAGACAAA  
TATCCCTGTAATGGACAAGTAATACCTACATTTTGTGACACTTCATTTACTTCTTTTCAGGCCTGAATGGCAGTCA  
GTATATCCTTTTATAGTGCCCTATGGTCCCCCTCTTCCAGTTTGAACATCATTAAACATTCAGAGATTGAGT  
GGTCCACCAAATCCACCATCAAATATTTTCCAAGCCCAGATGACTCTCAGATACAAAATGGATATTATGTAAAT  
AATTGTCATGTTAACTGGAATTGCATGACTTTTGATCAGAACAATGAATATACTGACTGTAGTGAGAATAGGAGT  
AGTGTTCATCCCTCTGGAATGGCTGCAGTATGCAAGATCGATATGTGAGTAATGGTTTTCTGTGAAGTCAGAGAA  
AGATGCTGGAAGATCATTGTATGGACAAGCATAATGGAACAGACAGGTTTGTGAACCAGCAGTTTCAAGAGGAA  
AAGTTAAATAAATTGCAGAAGTTACTTATCTTTTAAAGAGGTCTGCCTGGTTCTGGGAAAAACAACATTGTCTCGA  
ATTCTGCTTGGTCAGAAATCGTGATGGCATTGTGTTTACGACTGATGACTATTTTACCATCAAGATGGGTACAGG  
TATAATGTTAATCAACTTGGTGATGCCCATGACTGGAACCAGAACAGAGCAAAACAAGCTATCGATCAGGGAAGA  
TCTCCAGTTATAATAGATAACACTAATATACAAGCTTGGGAAATGAAGCCATATGTGGAAGTGCCATAGGAAAA  
GGATACAGAGTAGAGTTTCATGAACCTGAAACTTGGTGGAAATTTGATCCTGAAGAATTAGAAAAAGGAATAAA  
CATGGTGTGTCTCGAAAGAAGATTGCTCAGATGTTGGATCGTTATGAATATCAAATGTCCATTTCTATTGTAATG  
AATTCAGTGGAACCATCACACAAAAGCACAAAAGACCTCCTCCTCCACAGGGGAGACAGAGGTGGGGAGGCTCT  
CTTGGCTCACATAATCGTGTCTGTGTGCACAAATAATCAT~~TAA~~ATTAGCTATTTTCAGCTAACACATTTGTTGTTG  
CACTTGAAAAAGAGTTAGTGAGCCTGTCTTGGAGTTTAAAGTAGTTTCAAATAAAAAAAGGCTACAGTGCCTCACA  
AAGGATGTTCCAGCAAGTTGTTTAAATCCCAGCAAGTTGTTAAAGTGTAATAAAAAATATATGAAATTGTATT  
TTAAATGTTTTTATATTCTTGTGTTGTAATACTCTTGGCTGTTATGGAAGCACCTGAGTAATAGAGTGGTGGTA  
GGAGCTAGGATGTTTTTCTACAATCGAATTTTAACTAATTTATCTATTTTATAGACACTATTGAACAGTTTTTT  
AATAGTTCATATCTAAATCTAACTTTTCAATAAACTTTACGGTTTTTCTTCACTACCTTAAATATGCAAGAAAT  
ACTGACTTGGTATAGGGTACCTTAGTTTTCTTATTATTAGACAGGTAAAATTATATTTTTCAGCTGATTGATCTG  
TGTGACAAAAATTATTTCTTAGCTATAATCAGCACATCACTTAGTTCAAACAAAATCCCCAGCAAATGTTAGATA  
GTAGGTATATCAGTCACCTGGGGAGTTTTCTTCATAATATGCATATTCATCTTGTAAATGCATACATAGTTATCAT  
CCTCCTTCTCAACCCATCTCCCTAACCCACATGCTTGCCAGTTCTTGAAGGGATAAAGTGATTCTAATAATGTT  
TTACTTCTCTCTGTTCAATTTAATGTGATATAATTCTAGTATAAAAAATATTTTGGACAGTTGCTTAACATGGTCA  
TAAGAGGATTGTACTATAGAATATCTTCTAGTACTAATTTTTCTGTAGAGCAAATTATATTTCTCTCACTGGAT  
AGTTTTTAGATGTGTTTCTTCATATAAAATTTAAACTGAGATGGAATTC



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**FIGURE 3890**

MSYGEIEGKFLGPREEVTSEPRCKKLKSTTESYVFHNHNSNADFHRIQECTGNDWVPVTIIDVRGHSYLQENKIKT  
TDLHRPLHDEMPGNRPDVIESIDSQVLQEARPPLVSADDEIYSTSKAFIGPIYKPPEKKRNEGRNEAHVLNGIN  
DRGGQKEKQKFNSEKSEIDNELFQFYKEIEELEKEKDGFESENCKESEPSQEQFVFPFYEGHNNGLLKPDEEKKDLS  
NKAMP SHCDYQQNLGNEPDKYPCNGQVIPTFCDTSTFSRPEWQSVYPFIVPYGPPLPSLNYHLNIQRFSGPPNP  
PSNIFQAQDDSQIQNGYYVNNCHVNWNCMTFDQNNETDCSENRSSVHPSGNGCSMQDRYVSNGFCEVRERCWKD  
HCMDKHNGTDRFVNQQFQEEKLNKLQKLLILLRGLPGSGKTTLRILLGQNRDGIVFSTDDYFHHQDGYRYNVNQ  
LGDAHDWNQNRKQAIQGRSPVIIDNTNIQAWEMKPYVEVAIGKGYRVEFHEPETWWKFDPEELEKRNKHGVS  
RKIAQMLDRYEQMSISIVMNSVEPSHKSTQRPPPPQGRQRWGGSGLGSHNRVCVTNNH

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**FIGURE 3891**

CGAGCTGCCATGAGCCTCTGGGTGGACAAGTATCGGCCCTGCTCCTTGGGACGGCTGGACTATCACAAGGAGCAG  
GCGGCCCAGCTGCGGAACCTGGTGCAGTGTGGTGACTTTCCTCATCTGTTAGTGTACGGACCATCAGGTGCTGGA  
AAAAAGACAAGAATTATGTGTATTTTACGTGAACTTTATGGTGTGGAGTGGAAAAATTGAGAATTGAACATCAG  
ACCATCACAACCTCCATCTAAAAAATAATTGAAATTAGCACCATTGCAAGTAACTACCACCTTGAAGTTAATCCT  
AGTGATGCTGGAATAGTGACCGAGTAGTCATTGAGGAGATGTTGAAAACAGTGGCACAATCACAACAACCTTGAA  
ACAAACTCTCAAAGGGATTTTAAAGTGGTATTATTGACAGAAGTTGACAAACTCACCAAAGATGCTCAGCATGCC  
TTGCGAAGAACCATGGAAAAATATATGTCTACCTGCAGATTGATCTTGTGCTGCAATTCTACATCTAAAGTGATC  
CCACCTATTCTAGTAGGTGCTTGGCGGTTTCGTGTGCCTGCTCCCAGCATTGAAGATATTTGCCACGTGTTATCT  
ACTGTGTGTAAGAAGGAAGGTCTGAATCTTCCTTCACAACCTGGCTCATAGACTTGCAGAGAAGTCTTGTAGAAAT  
CTCAGAAAAGCCCTGCTTATGTGTGAAGCCTGCAGAGTGAACAATATCCTTTTACTGCAGATCAAGAAATCCCT  
GAGACAGATTGGGAGGTGTATCTGAGGGAGACTGCAAATGCTATTGTCAGTCAGCAAACCTCCACAAAGGCTCCTT  
GAAGTTCGTGGAAGGCTGTATGAGCTTCTAACTCATTGTATTCTCCTGAGATAATAATGAAGGGCCTTCTCTCA  
GAACTGTTACATAATTGTGATGGACAACCTGAAAGGGGAGGTGGCACAATGGCAGCTTACTATGAGCATCGTCTA  
CAGCTGGGTAGCAAAGCCATTTATCACTTGGAAGCGTTTGTGGCCAAATTCATGGCACTTTATAAGAAGTTCATG  
GAGGATGGATTGGAAGGCATGATGTTCTGACTTCTGTGCAATTATTCTTGCAAAGATTTCTCAGTATCAGTATTTA  
CATACAGCTTATATTAAAGAGCTGTGGGTAAATTAAGTGAACCTTAATCATGTCGTATTGGGTTTTTTTGGTAA  
TAACTTCTCTGTGAACCTATTAATCATCTCTGAGTTAAATAATTGCTCCTATACTATTGAAGTATGTAGTTTTGT  
ACATAACTTAGAGACTTTAGAGTCTAAGAAAATGATCTTAATTTACTTTAAGCATTGGTTATTCAAGTATTCATT  
GTTGATCCTCCTATTCTCTTCCGTCTAATCTCTCACCTGCTAAAGGAGATTTACACATTAGAAAGCAAAGATTAT  
TTTCATTTATCCAGATGACCATTTTCTGCCACAGGTAACATGATTGTTTGACGG

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**FIGURE 3892**

MSLWVDKYRPSLGRLDYHKEQAAQLRNLVQCGDFPHLLVYGPSGAGKKTRIMCILRELYGVGVEKLRIEHQTIT  
TPSKKKIEISTIASNYHLEVNP SDAGNSDRVVIQEMLKTV AQSQQLETNSQRDFKVLLTEVDKLT KDAQHALRR  
TMEKYMSTCRLILCCNSTSKVIPP IRSRCLAVRVPAPSIEDICHVLSTVCKKEGLNLPSQLAHLAEKSCRNLRK  
ALLMCEACRVQQYPFTADQEIPETDWEVYLRETANAIVSQQTPQRLLEVGRGRLYELLTHCIPPEIIMKGLLSELL  
HNCDGQLKGEVAQMAAYYEHRLQLGSKAIYHLEAFVAKFMALYKKFMEDGLEGMMF

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**FIGURE 3893**

GGGCGGGAAGATGGCGGCTGGGTTCAAACCGTGGAACCTCTGGAGTATTACAGGAGATTTCTGAAAGAGAACTG  
CCGTCCTGATGGAAGAGAACTTGGTGAATTCAGAACCACAACCTGTCAACATCGGTTCAATTAGTACCGCAGATGG  
TTCTGCTTTAGTGAAGTTGGGAAATACTACAGTAATCTGTGGAGTTAAAGCAGAATTTGCAGCACCATCAACAGA  
TGCCCTGATAAAGGATACGTTGTTCTTAATGTGGATCTACCACCCCTGTGTTTCATCGAGATTCCGGTCTGGACC  
TCCTGGAGAAGAGGCCCAAGTGGCTAGCCAGTTCATTGCAGATGTCATTGAAAATTCACAGATAATTCAGAAAGA  
GGACTTATGCATTTCTCCAGGAAAGCTTGCTGGGTTCTATACTGTGATCTCATTTGCCTCGACTACGATGGAAA  
CATTTTGGATGCCTGCACATTTGCTTTGCTAGCGGCTTTAAAAAATGTACAGTTGCCTGAAGTTACTATAAATGA  
AGAAACTGCTTTAGCAGAAGTTAATTTAAAGAAGAAAAGTTATTTGAATATTAGAACTCATCCAGTTGCAACTTC  
CTTTGCTGTGTTTGATGACACTTTGCTTATAGTTGACCCTACTGGAGAGGAGGAACATCTGGCAACAGGAACCTT  
AACAATAGTAATGGATGAGGAAGGCAAACTCTGTTGTCTTCACAAACCAGGCATGTTCCCGCCACTTCAGTCCTA  
AACATATGTAGATGAAAACCTCAGTGTGAGCCTTAAATTAGGGAGGGCCAAATAGAATATGG

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**FIGURE 3894**

MAAGFKTVEPLEYYRRFLKENCRPDGRELGEFRTTTVNIGSISTADGSALVKLGNTTVICGVKAEFAAPSTDAPD  
KGYVVPNVDLPPLCSSRFRSGPPGEEAQVASQFIADVIENSQIIQKEDLCISPGKLVWVLYCDLICLDYDGNILD  
ACTFALLAALKNVQLPEVTINEETALAEVNLKKKSYLNIRTHPVATSFVFDLTLIVDPTGEEHLLATGTLTIV  
MDEEGKLCCLHKPGGSGLTGAKLQDCMSRAVTRHKEVKKLMDEVIKSMKPK

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**FIGURE 3895**

AGAGACTCAAGATGATTCCCTTTTTACCCATGTTTTCTCTACTATTGCTGCTTATTGTTAACCCCTATAAACGCCA  
ACAATCATTATGACAAGATCTTGGCTCATAGTCGTATCAGGGGTCGGGACCAAGGCCCAAATGTCTGTGCCCTTC  
AACAGATTTTGGGCACCAAAAAGAAATACTTCAGCACTTGTAAGAACTGGTATAAAAAGTCCATCTGTGGACAGA  
AAACGACTGTGTTATATGAATGTTGCCCTGGTTATATGAGAATGGAAGGAATGAAAGGCTGCCCAGCAGTTTTGC  
CCATTGACCATGTTTATGGCACTCTGGGCATCGTGGGAGCCACCACAACGCAGCGCTATTCTGACGCCTCAAAAC  
TGAGGGAGGAGATCGAGGGAAAGGGATCCTTCACCTACTTTGCACCGAGTAATGAGGCTTGGGACAACCTGGATT  
CTGATATCCGTAGAGGTTTGGAGAGCAACGTGAATGTTGAATTACTGAATGCTTTACATAGTCACATGATTAATA  
AGAGAATGTTGACCAAGGACTTAAAAATGGCATGATTATTCCTTCAATGTATAACAATTTGGGGCTTTTCATTA  
ACCATTATCCTAATGGGGTTGTCACTGTTAATTGTGCTCGAATCATCCATGGGAACCAGATTGCAACAAATGGTG  
TTGTCCATGTCTATTGACCGTGTGCTTACACAAATTGGTACCTCAATTCAGACTTCATTGAAGCAGAAGATGACC  
TTTCATCTTTTAGAGCAGCTGCCATCACATCGGACATATTGGAGGGCCCTTGAAGAGACGGTCACTTCACACTCT  
TTGCTCCCACCAATGAGGCTTTTGAAGAACTTCCACGAGGTGTCTTAGAAAGGATCATGGGAGACAAAGTGGCTT  
CCGAAGCTCTTATGAAGTACCACATCTTAAATACTCTCCAGTGTTCTGAGTCTATTATGGGAGGAGCAGTCTTTG  
AGACGCTGGAAGGAAATACAATTGAGATAGGATGTGACGGTGACAGTATAACAGTAAATGGAATCAAAATGGTGA  
ACAAAAAGGATATTGTGACAAATAATGGTGTGATCCATTGATTGATCAGGTCTTAATTCCTGATTCTGCCAAAC  
AAGTTATTGAGCTGGCTGGAACACAGCAACCACCTTCACGGATCTTGTGGCCCAATTAGGCTTGGCATCTGCTC  
TGAGGCCAGATGGAGAATACACTTTGCTGGCACCTGTGAATAATGCATTTCTGATGATACTCTCAGCATGGATC  
AGCGCTCCTTAAATTAATTCTGCAGAAACACATATTGAAAGTAAAGTTGGCCTTAATGAGCTTTACAACGGGC  
AAATACTGGAACCATCGGAGGCAAACAGCTCAGAGTCTTCGTATATCGTACAGCTGTCTGCATTGAAAATTCAT  
GCATGGAGAAAGGGAGTAAGCAAGGGAGAAACGGTGCGATTTCACATATTCGCGAGATCATCAAGCCAGCAGAGA  
AATCCCTCCATGAAAAGTTAAACAAGATAAGCGCTTTAGCACCTTCCTCAGCCTACTTGAAGCTGCAGACTTGA  
AAGAGCTCCTGACACAACCTGGAGACTGGACATTATTTGTGCCAACCAATGATGCTTTTAAGGGAATGACTAGTG  
AAGAAAAAGAAATTTCTGATACGGGACAAAAATGCTCTTCAAAACATCATTCTTTATCACCTGACACCAGGAGTTT  
TCATTGGAAGGATTTGAACCTGGTGTACTAACAATTTTAAAGACCACACAAGGAAGCAAAATCTTTCTGAAAG  
AAGTAAATGATACACITCTGGTGAATGAATTGAAATCAAAAGAATCTGACATCATGACAACAAATGGTGTAAATC  
ATGTTGTAGATAAACTCCTCTATCCAGCAGACACACCTGTTGGAAATGATCAACTGCTGGAATACTTAATAAAT  
TAATCAAATACATCCAAATTAAGTTTGTTCGTGGTAGCACCTTCAAAGAAATCCCCGTGACTGTCTATACAATA  
AAATTATAACCAAGTTGTGGAACCAAAATTAAGTGATTGAAGGCAGTCTTCAGCCTATTATCAAACTGAAG  
GACCCACACTAACAAAAGTCAAAATTTGAAGGTGAACCTGAATTCAGACTGATTAAAGAAGGTGAACAATAACTG  
AAGTGATCCATGGAGAGCCAATTATTAAAAATACACCAAAATCATTGATGGAGTGCCTGTGGAAATAACTGAAA  
AAGAGACACGAGAAGAACGAATCATTACAGGTCTGAAATAAAATACACTAGGATTCTACTGGAGGTGGAGAAA  
CAGAAGAACTCTGAAGAAATTGTTACAAGAAGAGGTACCAAGGTACCAAATTCATTGAAGGTGGTGATGGTC  
ATTTATTTGAAGATGAAGAAATTAAGAGACTGCTTCAGGGAGACACCCGTGAGGAAGTTGCAAGCCAACAAAA  
AAGTTCAAGGATCTAGAAGACGATTAAGGGAAGGTGCTTCTCAGTGAAAATCCAAAAACCAGAAAAAATGTTTA  
TACAACCCTAAGTCAATAACCTGACCTTAGAAAAATTGTGAGAGCCAAGTTGACTTCAGGAAGTGAACATCAGCA  
CAAAGAAGCAATCATCAATAATTCTGAACACAAATTTAATATTTTTTTCTGAATGAGAAACATGAGGGAAAT  
TGTGGAGTTAGCCTCCTGTGGTAAAGGAATTGAAGAAAATATAACACCTTACACCCTTTTTCATCTTGACATTAA  
AAGTTCTGGCTAACTTTGGGAATCCATTAGAGAAAAATCCTTGTCAACAGATTCAATACAATTCAAATCGAAGAGT  
TGTGAAGTGTATCCATTGAAAAGACCGAGCCTTGTATGTATGTTATGGATACATAAAATGCACGCAAGCCATT  
ATCTCTCCATGGGAAGCTAAGTTATAAAAAATAGGTGCTTGGTGTACAAAACCTTTTATATCAAAAGGCTTTGCAC  
ATTTCTATATGAGTGGGTTTACTGGTAAATTATGTTATTTTTTACAATAATTTGTACTCTCAGAAATGTTTGTG  
ATATGCTTCTTGCAATGCATATTTTTTAATCTCAAACGTTTCAATAAAACCATTTTTCAGATATAAAGAGAATTA  
CTTCAAAATGAGTAATTCAGAAAACTCAAGATTAAAGTTAAAGAGTGGTTTGGACTTGGGAA

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**FIGURE 3896A**

GCAGCCGCCACATTCAACAGGCAGCAGCGCAGCGGGCGCGCCGCTGGGGAGAGCAAGCGGCCCCGGCGCTCCGTC  
CGTCCTTCCGTCCGCGGCCCTGTCTAGCTGGAGCGCGGCGCAGGCTCTGCCCCGGCCCGGGCTCTGGCCGGCCG  
TCCAGTCCGTGCGGCGGACCCCGAGGAGCTCGATGTGGATGGCCCCGCGAAGTTAAGTTCTGGGCTCGCGCTTC  
CACTCCGCGCGCCTTCTCCAGTTTCCGTCCGCTCGCCGCACCGGCTTCGTTCCCCCAAATCTCGGACCGTCC  
CTTCGCGCCCCCTCCCGTCCGCCCCCAGTGCTGCGTTCTCCCCCTCTTGCTCTCCTGCGGCTGGGGGAGGGG  
GGGGGTCAACATGGCCGAGGCGCCTCAGGTGGTGGAGATCGACCCGGACTTCGAGCCGCTGCCCCGGCCGCGCTC  
GTGCACCTGGCCGCTGCCAGGCGGAGTTTAGCCAGTCCAACTCGGCCACCTCCAGCCGGCGCGCTCGGGCAG  
CGCGGTGCCAACCCGACGCGCGGCGGGCTGCCCTCGGCTCGGCTGCCGCTGTACGCGCGACTTCATGAG  
CAACCTGAGCTTGCTGGAGGAGAGCGAGGACTTCCCGCAGGCGCCCGGCTCCGTGGCGGCGGCGGTGGCGGCGGC  
GGCCGCGCGGCGGCCACCGGGGGGCTGTGCGGGGACTTCAGGGCCCGGAGGCGGGCTGCCTGCACCCAGCGCC  
ACCGCAGCCCCCGCGCGCCGGGCGCTGTGCGAGCACCGCGGCTGCCCCCGCGCGCTGGGCGGCTCGCGGG  
GCAGCCGCGCAAGAGCAGCTCGTCCCGCCGAACGCGTGGGGCAACCTGTCTACGCCGACCTCATCACCAGGC  
CATCGAGAGCTCGGCGGAGAAGCGGCTCACGCTGTGCGAGATCTACGAGTGGATGGTCAAGAGCGTGCCCTACTT  
CAAGGATAAGGGTGACAGCAACAGCTCGGCGGGCTGGAAGAATTCAATTCGTATAATCTGTCCCTACACAGCAA  
GTTTCATTCGTGTGAGAATGAAGGAAGTGGAAAAAGTTCTTGGTGGATGCTCAATCCAGAGGGTGGCAAGAGCGG  
GAAATCTCCTAGGAGAAGAGCTGCATCCATGGACAACAACAGTAAATTTGCTAAGAGCCGAAGCCGAGCTGCCAA  
GAAGAAAGCATCTCTCCAGTCTGGCCAGGAGGCTGTGGGGACAGCCCTGGATCACAGTTTTCCAAATGGCCTGC  
AAGCCCTGGCTCTCACAGCAATGATGACTTTGATAACTGGAGTACATTTGCCCCCGAACTAGCTCAAATGCTAG  
TACTATTAGTGGGAGACTCTCACCCATTATGACCGAACAGGATGATCTTGGAGAAGGGGATGTGCATTCTATGGT  
GTACCCGCCATCTGCCGCAAGATGGCCTCTACTTTACCCAGTCTGTCTGAGATAAGCAATCCCGAAAAATGGA  
AAATCTTTTGATAATCTCAACCTTCTCTCATCACCAACATCATTAACTGTTTCGACCCAGTCTCACCTGGCAC  
CATGATGCAGCAGACGCCGTGCTACTCGTTTGGCCACCAACACAGTTTGAATTCACCCAGCCCAAATACCA  
AAAATATACATATGGCCAAATCCAGCATGAGCCCTTTGCCCCAGATGCCTATACAAACACTTCAGGACAATAAGTC  
GAGTTATGGAGGTATGAGTCAGTATAACTGTGCGCCTGGACTCTTGAAGGAGTTGCTGACTTCTGACTCTCCTCC  
CCATAATGACATTATGACACCAGTTGATCCTGGGGTAGCCAGCCCAACAGCCGGGTTCTGGGCCAGAACGTCA  
GATGGGCCCTAATTCGGTCATGTCAACCTATGGCAGCCAGGCATCTCATAACAAAATGATGAATCCAGCTCCCA  
TACCCACCTGGACATGCTCAGCAGACATCTGCAGTTAACGGGCGTCCCCTGCCCCACAGGTAAGCACCATGCC  
CCACACCTCGGGTATGAACCGCTGACCCAAGTGAAGACACCTGTACAAGTGCCCTGCCCCACCCCATGCAGAT  
GAGTGCCCTGGGGGGCTACTCCTCCGTGAGCAGCTGCAATGGCTATGGCAGAATGGGCCTTCTCCACCAGGAGAA  
GCTCCCAAGTGACTTGGATGGCATGTTTATTGAGCGCTTAGACTGTGACATGGAATCCATCATTGGAATGACCT  
CATGGATGGAGATACATTGGATTTTAACTTTGACAATGTGTTGCCCAACCAAGCTTCCACACAGTGTCAAGAC  
AACGACACATAGCTGGGTGTGAGGCTGAGGGTTAGTGAGCAGGTTACACTTAAAGTACTTCAGATTGTCTGACA  
GCAGGAAGTGAAGAAGCAGTCCAAAGATGTCTTACCAACTCCCTTTAGTTTTCTGGTTAAAAAAGAAC  
AAAAAAGAACCTCCTTTTTTCTCTTCTGTCAGACTTGGCAGCAAAGACATTTTCTGTACAGGATGTTTGC  
CCAATGTGTGAGGTTATGTGCTGCTGTAGATAAGGACTGTGCCATTGGAATTTTCAATGAAGTGCCAAA  
CTCACTACACCATATAATTGCAGAAAAGATTTTCAATCCTGGTGTGCTTTCAAGTTTGTATATAAGCAGTAGA  
TACAGATTGATTTGTGTGTGTTTTTGGTTTTTCTAAATATCCAATTGGTCCAAGGAAAGTTTATACTCTTTTG  
TAATACTGTGATGGGCCTCATGTCTTGATAAGTTAACTTTTGTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG  
ATCACAAGAACTGAATCTCCATTCTGCATCTCCATTGAACAGCCTTGGACCTGTTACGTTGCCACAGAATTCA  
CATGAGAACCAAGTAGCCTGTTATCAATCTGCTAAATTAATGGACTGTGTTAACTTTTGGAAAAAAGATTAA  
ATGCCAGCTTTGTACAGGCTTTTCTATTTTTTTTGTGTTATTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG  
TGGTTCTAATTTCCAGATAAATGATTTTTGATGTTATGTTGGGACTTAAGAACATTTTGGAAATGATATTGAA  
CTGTAATAATGTTTTCTTAAACTAGAGTCTACTTTGTTACATAGTCAGCTTGTAATTTGTGGAACACAGGT  
ATTTGGGGCAGCATTACATAATTTTCAATTTTGTATTCTAACTGGATTAGTACTAATTTTATACATGCTTAACGGT  
TTGTACACTTTGGGATGCTACTTAGTGATGTTTCTGACTAATCTTAAATCATTGTAATTAGTACTTGCATATTCA  
ACGTTTCAGGCCCTGGTTGGGCAGGAAAGTGATGTATAGTTATGGACACTTTGCGTTTCTTATTTAGGATAACTT  
AATATGTTTTTATGTATGTTTTTAAAGAAATTTTCACTGCTTCTACTGAACTATGCGTACTGCATAGCATCAAG  
TCTTCTCTAGAGACCTCTGTAGTCTGGGAGGCTCATAATGTTTGTAGATCAGAAAAGGAGATCTGCATCTAA

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**FIGURE 3896B**

AGCAATGGTCCTTTGTCAAACGAGGGATTTTGATCCACTTCACCATTTTGAGTTGAGCTTTAGCAAAAGTTTCCC  
CTCATAATTCTTTGCTCTTGTTTCAGTCCAGGTGGAGGTTGGTTTTGTAGTTCTGCCTTGAGGAATTATGTCAAC  
ACTCATACTTCATCTCATTCTCCCTTCTGCCCTGCAGATTAGATTACTTAGCACACTGTGGAAGTTTAAGTGGAA  
GGAGGGAATTTAAAAATGGGACTTGAGTGGTTTGTAGAATTTGTGTTTCATAAGTTCAGATGGGTAGCAAAATGGAA  
TAGAACTTACTTAAAAATGGGGAGATTTATTTGAAAACCACTGTAAGTTGTGCATTGAGATTATGTTAAAAGC  
CTTGGCTTAAGAATTTGAAAATTTCTTTAGCCTGTAGCAACCTAAACTGTAATTCCTATCATTATGTTTTATTAC  
TTTCCAATTACCTGTAACGTACAGACCAAATTAATTGGCTTTGTGTCTATTTAGTCCATCAGTATTTTCAAGTC  
ATGTGGAAGCCCCAAAGTCATCACAATGAAGAGAACAGGTGCACAGCACTGTTCCCTTTGTGTTCTTGAGAAGGA  
TCTAATTTTCTGTATATAGCCACATCACACTTGCTTTGTCTTGTATGTTAATTGCATCTTCATTGGCTTGGA  
TTTCCTAAATGTTTAAACAAGAACACAAGTGTTCCTGATAAGATTTCTACAGTAAGCCAGCTGTATTGTAAGCTT  
CCCACCGTGATGATCATTTTTTTTGAAGATTCAATGAACAGCCACCACTCTATCATCTCATTGTTGGGGCAGTCCA  
AGACATAGCTGGTTTTTAGAAACCCAAAGTTCCTCTAAGCACAGCCTCCCGGGTATGTAAGTGAAGTGGTGCCAAA  
GTACTTGTGTACTAATTTCTATTACTACGTACTGTCACTTTCCTCCCGTGCCATTACTGCATCATAATACAAGGA  
ACCTCAGAGCCCCCATTTGTTTCATTAAAGAGGCAACTACAGCCAAAATCACTGTTAAAAATCTTACTACTTCATGG  
AGTAGCTCTTAGGAAAATATATCTTCCTCCTGAGTCTGGGTAATTATACCTCTCCCAAGCCCCCATTTGTGTGTTG  
AAATCCTGTGATGAATCCTTGGTAGCTCTCTGAGAACAGTGAAGTCCAGGGAAAGGCATCTGGTCTGTCTGGA  
GCAAACATTATGTGGCCTCTGGTAGTTTTTTTTCTGTGAAGAATCTGACTTTCCTGGAGTAATGAGTATATATCAG  
TTATTGTACATGATTGCTTTGTGAAATGTGCAATGATATCACCTATGCAGCCTTGTTTGATTTATTTTCTCTGG  
TTTGACTGTTATTAAAAGCATATTGTATTATAGAGCTATTAGATATTTTAAATATAAAGATGTATTGTTTCCG  
TAATATAGACGTATGGAATATATTTAGGTAATAGATGTATTACTTGGAAGTTCTGCTTTGACAACTGACAAAG  
TCTAAATGAGCACATGTATCCAGTGAGCAGTAAATCAATGGAACATCCCAAGAAGAGGATAAGGATGCTTAAAA  
TGGAATCATTCTCCAACGATATACAAATTGGACTTGTTCAACTGCTGGATATATGTACCAATAACCCAGCCC  
CAACTTAAAAATCTTACATTCAAGCTCCTAAGAGTTCTTAATTTATACTAATTTTAAAGAGAAGTTTCTTTTC  
TGGTTTTAGTTGGGAATAATCATTCAATAAAAAAATGTATTGTGGTTTATGCGAACAGACCAACCTGGCATT  
CAGTTGGCTCTCCTTGAGGTGGGCACAGCCTGGCAGTGTGGCCAGGGGTGGCCATGTAAGTCCCATCAGGACGT  
AGTCATGCCCTCCTGCATTTTCGTACCCGAGTTTAGTAACAGTGCAGATTCCACGTTCTTGTCCGATACCTGAG  
AAGTGCCTGATGTTGATGTACTTACAGACACAAGAACAATCTTTGCTATAATTGTATAAAGCCATAAATGTACAT  
AAATTATGTTTAAATGGCTTGGTGTCTTTCTTTCTAATTATGCAGAATAAGCTCTTTATTAGGAATTTTTGTG  
AAGCTATTAAATACTTGAGTTAA



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**FIGURE 3897**

MAEAPQVVEIDPDFEPLPRPRSCWTPLPRPEFSQSNSATSSPAPSGSAAANPDAAAGLPASAAAVSADFMSNLS  
LLEESDFPQAPGSVAAAVAAAAAATGGLCGDFQGPEAGCLHPAPPQPPPGPLSQHPPVPPAAAGPLAGQPR  
KSSSSRRNAWGNLSYADLITKAIESSAEKRLTSLQIYEWVKSVPYFKDKGDSNSSAGWKNSIRHNLSLHSEFIR  
VQNEGTEKSSWWMLNPEGKSGKSPRRRAASMDNNSKFAKSRRAAKKASLQSGQEGAGDSPGSQFSKWPASPG  
SHSNDDFDNWSTFRPRTSSNASTISGRSLPIMTEQDDLGEGDVHSMVYPPSAAKMASTLPSLSEISNPENMENLL  
DNLNLLSSPTSLTVSTQSSPGTMMQQTCPYSFAPPNTSLNSPSPNYQKYTYGQSSMSPLPQMPIQTLQDNKSSYG  
GMSQYNCAFGLLKELLTSDSPPHNDIMTPVDPGVAQPNRVLGQNVMMGPNSVMSTYGSQASHNKMMPSSHTHP  
GHAQQTSAVNGRPLPHTVSTMPHTSGMNRLTQVKTPVQVPLPHEMQMSALGGYSSVSSCNGYGRMGLLHQEKLP  
DLDMGFIERLDCDMESIIRNDLMDGDTLDFNFDNVLPNQSFPHSVKTTTHSWVSG

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**FIGURE 3898**

GGTTCATTTCTGTCTCGGCGATGTTTCCTAGAGTCTCGACGTTCTACCTCTTCGCCCCCTTTCCCGCCACCCT  
TTGTCCTCTGGAAGCCCGGAGACATCAGCGGCTGCGATTATGCTACTCACTGTTTCGGCACGGAACAGTCAGGTAC  
CGCAGTTTCAGCGCTGTTGGCCCGGACAAAAATAACATCCAAAGATATTTTGGCACTAACAGTGTGATCTGTAGC  
AAGAAAGATAAGCAGTCTGTTTCTGAACTGAGGAGACTTCCAAGGAGACTTCAGAGAGCCAAGACAGTGAAGGAA  
AATACGAAAAAGACTTGTAGGCATTATTAAGGGCATGAAAGTTGAATTAAGCACAGTAAATGTACGAACAACA  
AAGCCCCCAAGAAAGACCCTTAAAAGTTTGGAGCTACACTTGGCAGGCTTCGAAGAGCTACAGAATATGCT  
CCAAAGAAGAGAATTGAGCCCCTGAGTCTGAGTTGGTGGCAGCTGCATCTGCTGTGGCAGATTCTCTCCCTTTT  
GATAAGCAAACAACCAAGTCAGAGCTGCTGAGCCAGCTCCAGCAGCATGAGGAAGAGTCAAGGGCACAGAGAGAT  
GCAAAGCGACCTAAAATTAGTTTCAGTAACATAATATCAGATATGAAAGTTGCCAGATCTGCTACAGCTAGAGTT  
CGTTCAAGACCAGAGCTTCGGATTGAGTTTGTATGAAGGCTATGACAATTATCCTGGCCAGGAGAAGACGGATGAT  
CTAAAAAAGGAAAAATATATTCACAGGGAAAAGACTTAATATTTTGGACATGATGGCAGTTACTAAAGAAAGCA  
CCTGAAACAGACACATCACCTTCACTTTGGAATGTGGAATTTGCTAAGCAGTTAGCCACAGTAAATGAACAACCC  
CTTCAGAATGGATTGGAAGAGCTGATCCAGTGGACAAAAGAGGGGAACTATGGGAGTTCCCAATTAACAATGAA  
GCAGGTTTTGATGATGATGGTTTCAATTTTATGAACATATATTTCTGGAGAAACACCTGGAGAGCTTTCCAAAA  
CAAGGACCAATTCGCCACTTCATGGAGCTGGTGACTTGTGGCCTTTCCAAAAACCATATCTTAGTGTTAAACAG  
AAGGTTGAACACATAGAGTGGTTTAGAAATTATTTTAAAGAAAAAGGATATTCTAAAAGAAAGTAACATACAG  
TTCAATTAAAGACCATGGAAATTTTATTTCAAACAATTAGAGATGGATATTACAATAAATAAATTTTACT  
AGAGTTTGT

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**FIGURE 3899**

MFPRVSTFLPLRPLSRHPLSSGSPETSAAAIMLLTVRHGTVRYRSSALLARTKNNIQRYFGTNSVICSKKDKQSV  
RTEETSKETSESQDSEKENTKKDLLGIKGMKVELSTVNVRTTKPPKRRPLKSLEATLGRLRRATEYAPKKRIEF  
LSPELVAAAASAVADSLPFDKQTTKSELLSQLQQHEEESRAQRDAKRPKISFSNII SDMKVARSATARVRSRPELR  
IQFDEGYDNYPGQEKTDLLKKRNIFTGKRLNIFDMMAVTKEAPETDTSPSLWNVEFAKQLATVNEQPLONGFEE  
LIQWTKEGKLWEFPINNEAGFDDGSEFHEHIFLEKHLESFPGQPIRHFMELVTCGLSKNPYLSVKQKVEHIEW  
FRNYFNEKKDILKESNIQFN

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**FIGURE 3900**

CCCCCCGAGCGCGCTCCGGCTGCACCGCGCTCGCTCCGAGTTTCAGGCTCGTGCTAAGCTAGCGCCGTCGTCG  
TCTCCCTTCAGTCGCCATCATGATTATCTACCGGGACCTCATCAGCCACGATGAGATGTTCTCCGACATCTACAA  
GATCCGGGAGATCGCGGACGGGTTGTGCCTGGAGGTGGAGGGGAAGATGGTCAGTAGGACAGAAGGTAACATTGA  
TGACTCGCTCATTGGTGGAAATGCCTCCGCTGAAGGCCCCGAGGGCGAAGGTACCGAAAGCACAGTAATCACTGG  
TGTGATATTGTCATGAACCATCACCTGCAGGAAACAAGTTTCACAAAAGAAGCCTACAAGAAGTACATCAAAGA  
TTACATGAAATCAATCAAAGGGAAACTGAAGAACAGAGACCAGAAAGAGTAAAACCTTTTATGACAGGGGCTGC  
AGAACAAATCAAGCACATCCTTGCTAATTTCAAAAACCTACCAGTTCTTTATTGGTGAAAACATGAATCCAGATGG  
CATGGTTGCTCTATTGGACTACCGTGAGGATGGTGTGACCCCATATATGATTTTCTTTAAGGATGGTTTAGAAAT  
GGAAAAATGTTAACAAATGTGGCAATTATTTTGGATCTATCACCTGTCATCATAACTGGCTTCTGCTTGTATCC  
ACACAACACCAGGACTTAAGACAAATGGGACTGATGTCATCTTGAGCTCTTCATTTATTTTACTGTGATTTATT  
TGGAGTGGAGGCATTGTTTTTAAGAAAAACATGTCATGTAGGTTGTCTAAAAATAAAATGCATTTAACTCATT  
GAGAG

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**FIGURE 3901**

MIYRDLISHDEMFSDIYKIREIADGLCLEVEGKMVSRTEGNIDDSLIGGNASAEGPEGEGTESTVITGVDIVMN  
HHLQETSFTKEAYKKYIKDYMKSIGKLEEQRPERVKPFMTGAAEQIKHILANFKNYQFFIGENMNPDMVALLD  
YREDGVTPYMIFFKDGLEMEKC

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**FIGURE 3902**

GC GG CAC GAG CG GG CG TG CT GAG CCCC GG CG CC GG CCCC GG CAT GGG CGT CT CCG CG GG CCCC CT CCG CT GGG CG  
GGG CTAG GCG CGG ATG GAG CCG CG GG AC GG TAG CCG GAG GCG CG GAG CAG CACT GCG AGT CGG CT TCC GC CT C  
GT C CAG CG GCT CCG AG CCG CAC GCG GGT CCG GAG CCG GACA AGG CCG CG CG GCG ACT CAACA AG CG GCG CT TCCC  
GGGG CTG CG GCT CTT CG GG CAC AGG AAA GGC AT CAC CAAG TCT GGC CT CAG CAC CT GGG CCCCC CT CCG CCCC AC  
CC CT GGG GCG CG GTG CAG CG AGT CAG AG CCG CAG AT CCG GAG TAC AGT GGA CT GGA GCG AGT CGG CG AC ATAT GG  
GG AG CAC AT CT GGT TCG AG ACCA ACG TGT CCG GGG ACT TCT GCT AC GT TGG GAG CAG TACT GT GTAG CC AGG AT  
GCT G CAG AAG T CAG TGT CT CGA AGA AGT GCG CAG CCT GCA AG ATT GT GGT G CAC AC GCG CCT GC AT CAG CAG CT  
GG AGA AG ATA AAT TTT CCG CT GT AAG CC AT CCT TCC GT GA AT CAG GCT CCA GGA AT GT CCT CG AG CCA A CCT TTT GT  
AT GGC ACC ACT GGG TAC AC AG AC GAC GCG CAG GCA AGT GT CGG CACT GT GGG AAG GG ATT C CAG CAG AAG TT  
CAC CT TCC AC AG CAAG GAG ATT GT GGC AT CAG CT GCT CGT GGT GCA AG CAG GCA TACC AC AG CAAG GT GCT CTG  
CTT CGT GCT G CAG CAG AT CAG GAG CCG TGT CCG TGG GGG TCC AC G CAG CCG TGG TCA TCCC GCG CAC CT GGA T  
CCT CCG CG CCG GAG GCG CCGA TACT CT GAA AG CAAG CAAGA AGA AGAG GGC AT CCT TCA AG AG GAAG TC  
CAG CAAG AAA GGG CCG T GAG GAG GCG CCG TGG AG ACC TT CAT CAT CAG GCG CAC CCG CT CCCCC CT CAT GAAG CC  
CCT GCT GGT GTT GT GA ACC CCA AG AGT GGG GGG CA ACC AGG GT GCA AG AT CAT CAG TCT TTT CCT CT GGT AT CT  
CA AT CCG GACA AGT CTT CG AC CT GAG CC AGG GAG GGG CCA AG GAG GCG CT GGA GAT GT ACC GCA AGT GC ACA  
CCT GCG GAT CCT GGC GT GCG GGG GCG AC GGC AC GGT GGG CT GGA TCT CT CAC CCG TGG ACC AG CTAC GCT GAA  
GCC GCG CAC CCG CT GT TGC AT CCT GCG CCG TGG TACT GGC AAC GACT TGG CCG AAC CCG TCA ACT GGG GT GGG GG  
CT AC AC AG AT GAG CCG TGT GTC AAG AT CCT CT CCG CAG TGG AG GAG GGA AC GT GGT AC AG CT GGA CCG CT GGG A  
CCT C CAG CT GAG CCG AAC CCG AGG CAG GCG CT GAG GAC CAG AT GA AG GCG CAC CCG ACC GGT TGC CCG TGG A  
TGT CTT CAACA ACT ACT T CAG CCG TGG GCT TTT GAC GCG CAC GT CAC CCG TGG AGT TCC AC GAG TCT CG AG AG CCG AA  
CCC AGA GAA TT CAAC AG CCG CT TTT CGGA ATA AG AT GTT CTAC GCG GGC CAG CTTT CT GACT TCT GAT GGG  
CAG CT CCA AGG ACT GGC CAAG CAC AT CCG AGT GGT GTG TAT GGA AT GGA CT TGA CT CCGA AG AT C CAG GAC CT  
GAA ACC CCG AGT GT GT TTT CT GA AC AT CCG CAG TACT GT GCG GGC ACC AT GCG CT GCG GCG CAC CCG TGG GA  
GC ACC AG ACT TTT GAG CCG CAG CG CAG TAC GAC GCG TAC CT CAG GT CAT TGG CT TACC AT GAC GT CAT TGG C  
CG CCG TGC AG GT GGG CGG AC AC GCG GAG CCG CT GAC G CAG TGT CCG GAG GT GGT GCT CAC CAC AT CCA AG GCG AT  
CCC GGT G CAG GT GGA TGG C GAG CCG TGA AG CT TGC AG CT CAC GAT CCG CAT TGC CT GCG CA ACC AG GCG AC  
CAT GGT G CAG AAG GCG AAG CCG GAG CCG CCG CCG CCG CT G CAC AG CAG CAG CCG GTGCC AG AG CAG TT GCG  
CAT CAG GT GAG AC GCG T CAG CAT G CAG CACT AT GAG GCG CT G CACT AC GACA AGG AG CAG CT CAAG GAG CCG TC  
CGT GCG CCG TGG CACT GT GGT GGT CCG AG GAG AC GT GAC CTAG AG CT TGC CCG TCG CAC ATT GAG AG ACT CCA  
GC AG GAG CCG CAT GGT GCT GGA GCG AAG TCCCC GAC ATGCC AGAA CTGT CCCCCA AGT GGT GCT TCT TGG AG CG  
CACC ACT GCG CAG CCG CT TCTAC AGG ATCA ACC GAG CCG AGG AG CAC CTCA ACT AT GT GACT GAG ATCG CAC AGGA  
TG AG ATTT ATAT CCT GGA CCG T GAG CT GCT GGG GGC AT CCG CCG GCG CT GAC CT CCGA ACC CCG ACT TCCC CT CT  
CCCC ACT CAC CCG TGT CAC CCG CCG CCG GCT CACT GCA AG GGG AT GT G CAC CCG CT CAAG GT GA AG AG CT GAT  
TG AG GCT GCG AAG AG GAAC GACT TCT GTA AG CT CAG GAG CT G CAC CAG CT GGG GCG AC ATCAT G CAC CCG AGA  
CAAG CAG AGT CCG AC GCT CCG TGC ACC CAG CAG T CAG CACT GGC CAG CAAGG AT GT GGT CCG TAC CT GCT GGA CCA  
CG CT CCG CAG AG AT CCT TGT GCG GT GGA GGA AAA CCG GGG AG AC CT GTT TGC ACCA AG CAG CCG CCG TGG GCGA  
GCG CAC CAT CTGCC ACTAC ATCG TGG AG GCG GGG GCG CAG ACC CAG AGG GCG AC ACT CCG GCG CAG AGG CT GAG A  
AG GCT CAG GAC ACC GAG CT GCG GCG CTAC CT GGA GA ACC GCG CAG CACT ACC AG ATG AT CAG CCG GAG GAG CAG G  
AG AG GCG CT GT GTAG CCG GCG CCG CCG CCG GCG CAG CAG GAG GACA AT GCG GCG CAG GGG AT GAG CCG CT TCT TGG CC  
AC CT CACT GCG CAC ATT CAG TGG GAC GCG CAC GGG GGG GAG CTTAG GCG CAG GGA AG AG CCG CCG AT GCG CCG CCG CT  
AAG GAG CCG CAC AG ACTAG GGT GGA CT CAG GAG CT GGG GGG CCG TAC CT GT TCCC CT GAG GAC CCG CCG GAG  
CC GAG GGT CAC AG GGA ACA AG AC GCG CT GGG TTG GAT ATGC CTT TGG CCG GGT TCT GGG GCG AG GCG CT CCG T  
GG CCG CAG CAG AT GCG CT CCG CAG GAG TGG AG GGG CT GGA GAG GGG AAG GCG CT TCG GGA AG AG CCG TCT TGG GCG  
CCT GGT CTT CGG CCG GGT CCG CAG CCG CCG CT CCG TCG CCG CAC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG  
GT GCT GCT G CACT TGC CT GCG CT GCG TGT TGG CAC CCG CT CCG GCG AC CCG TCCC GCG CT CCG CT GCT ATT

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**FIGURE 3903A**

TTTTTCTTTCCTGGCTGATGATTTGTCAATTCTAGTCACTTCCTGCCTTGTGACCACACACCCAGGCTTGACAAAG  
CTGTTCTGCAGATCAGAAAGAAGGGGTTCTGGTCATACACCAGTACTACCAAGGACAGCTTTTTTCTGCAAGA  
TCTGTTACCTAAAGCAATAAAAAATGGCCAGAGGATCAGTGTCCGATGAGGAAATGATGGAGCTCAGAGAAGCTT  
TTGCCAAAGTTGATACTGATGGCAATGGATACATCAGCTTCAATGAGTTGAATGACTTGTTCAGGCTGCTTGCT  
TGCCTTTGCTGGGTATAGAGTACGAGAAATTACAGAAAACCTGATGGCTACAGGTGATCTGGACCAAGATGGAA  
GGATCAGCTTTGATGAGTTTATCAAGATTTTCCATGGCCTAAAAAGCACAGATGTTGCCAAGACCTTTAGAAAAG  
CAATCAATAAGAAGGAAGGGATTGTGCAATCGGTGGTACTTCAGAGCAGTCTAGCGTTGGCACCCAACTCTCT  
ATTGAGAGGAAGAAAAGTATGCCTTTGTCAACTGGATAAACAAAGCCCTGGAAAATGATCCTGATTGTCCGCATG  
TCATCCCAATGAACCCAAACACGAATGATCTCTTAATGCTGTTGGAGATGGCATTGTCCTTTGTAAATGATCA  
ACCTGTCTAGTCCAGACACAATTGATGAAAGAACAATCAACAAAAAGAGCTAACCCCTTTCACCATTCAGGAAA  
ATCTGAACCTGGCTCTGAACCTGCTCAGCCATCGGGTGCCATGTGGTCAACATAGGGGCTGAGGACCTGAAGG  
AGGGGAAGCCTTATCTGGTCTGGGACTTCTGTGGCAAGTCATCAAGATTGGGTGTTTGTCTGACATTGAACTCA  
GCAGAAATGAAGCTCTGATTGCTCTTTTGAGAGAAGGTGAGAGCCTGGAGGATTGATGAAACTCTCCCTGAAG  
AGCTCTTGCTGAGGTGGGCTAATTACCACCTGGAAAATGCAGGCTGCAACAAAATTGGCAACTTCAGTACTGACA  
TCAAGGACTCAAAAGCTTATTACCACCTGCTTGAGCAGGTGGCTCCAAAAGGAGATGAAGAAGGTGTTCTGCTG  
TTGTTATTGACATGTCTAGGACTGCGGGAGAAGGATGACATCCAGAGGGCAGAATGCATGCTGCAGCAGGCGGAGA  
GGCTGGGCTGCCGGCAGTTTGTACAGCCACAGATGTTGTCCGAGGGGAACCCCAAGTTGAACTTGGCTTTTATTG  
CCAACCTCTTTAACAGATACCCCTGCCTGACACAAACCAGAGAACCAGGACATTGACTGGGGGGCTCTTGAAGGTG  
AGACGAGAGAAGAGCGGACATTTAGGAAGTGGATGAACTCCCTGGGTGTTAACCTCGAGTCAATCATTGTGACA  
GTGACTTATCAGATGCCCTGGTCATCTTCCAGCTCTATGAAAAGATCAAAGTTCTGTTGACTGGAACAGAGTAA  
ACAAACCGCCATACCCCAAACTGGGAGGCAATATGAAGAAGCTTGAGAATTGTAACACGCGGTAGAATTGGGGA  
AGAATCAAGCGAAGTTCTCCCTGGTTGGCATCGGTGGACAAGATCTCAATGAAGGAAACCGCACTCTCACACTGG  
CCTTGATTGAGCAGTAATGAGAAGGTATACACTGAATATCCTCGAAGAAATTGGTGGTGGCCAGAAGGTCAATG  
ATGACATTATTGTCAACTGGGTGAATGAAACATTGAGGGAAGCAAGAAAAGTTCAATCCATCTCTAGTTTCAAGG  
ACCCGAAGATTAGTACAAGTCTGCCTGTTCTGGACCTCATCGATGCCATCCAACCAGGTTCCATTAACATATGACC  
TTCTGAAGACAGAAAATCTGAATGATGATGAGAACTCAACAATGCAAAATATGCCATCTCTATGGCCCCGAAAAA  
TTGGAGCAAGAGTGTATGCCCTGCCAGAAGACCTGGTTGAAGTGAACCCCAAAATGGTCATGACCGTGTGTCCT  
GCCTCATGGGGAAAGGAATGAAGAGGGTGTGAGGCCCAATGGGGCTGGGTGGGAGGCGGTGCACTCACTCCTGAC  
TGCCCGGCACAGATGCTCCAGGGATGATTCAAGCCATTCAAAAGTTCAACTTGGTGACACTCTATAAGATTCCAA  
AAAGCACATATTAGTGCAGCCAAGTAGCCTCTCCTGTATTTAACAAAAAGTGCTTCATTCTTTGAGGAGGCCCA  
ACCTCCTATATATAGGTTTCTATTCTTGATTTATTTGCTTCTTCGAAAATCTAGAGGAAAAGAAAGATTATTT  
TCCAGGTACCCCTTCTCGCTTTTGCCATTAGCCAAGGATAGAAGCTGCAGTGGTATTAATTTTGATATAATCTTTC  
AAACCAGCTTCATGTGGCTTCCCTTTTCTTTGTTCAAGATGAGGGCCAGGAGGGGAAACATCACACCTGCCCTAA  
ACCTGTTCCTGGAGGTCAGCATTGTGATCTGTTGCAAGCCCTCTTCTGTCCCTCTTCTACCTGCCCTCCCT  
TGACTTTGCTCCTCACACTTTTGGAACCATGCCTTCCGGGGGGGCCATCTCTTCTGGCCGTCTTGTCTCTGGG  
CCACTTGGAGTGTGTGATAAATCAGTCAAGCTGTTGAAGTCTCAGGAGTCTCTGGTAGCCTGCAGAAGTAAGCCT  
CATCATCAGAGCCTTTCCTCAAACTGGAGTCCCAAATGTCATCAGGTTTTGTTTTTTTTTCAGCCACTAAGAACC  
CCTCTGCTTTTAACTCTAGAATTTGGGCTTGGACCAGATCTAACATCTTGAATACTCTGCCCTCTAGAGCCTTCA  
GCCTTAATGGAAGGTTGGATCCAAGGAGGGTGAATGGAGCATCAAGCCACTCGGCGGCAGCATGGAGCTATAAC  
TAAGCATCCTTTAGGGTTCTGCCTCTCCAGGCATTTAGCCCTCACATTAGATCTAGTTACTGTGGTATGGCTAAT  
ACCTGTCAACATTTGGAGGCAATCCTACCTTGCTTTTGCTTCTAGAGCTTAGCATATCTGATTGTTGTGAGGCCA  
TATTATCAATGTTTACTTTTTTGGTACTATAAAAGCTTTCTGCCACCCCTAAACTCCAGGGGGGACAATATGTGC  
CAATCAATAGCACCCCTACTCACATACACACACCTAGCCAGCTGTCAAGGGCAGAATGAATCTATGCTGGATA  
AGAAATGGTGGAAGTGCCTTATGAAGAGCTAATTTACTGGACAAAAGAAATCCAAAGCAAAACAGAACAGTATGA  
ATTTGAGCAGGTCTCATAGGTTGAGCAATTTCCCCCTAAACCAACTGAAGGCTAAAAAGCAACAGGCCATTGTGA  
ACCAATGCAAGACGCCCTCTATCATGGTGAAAAGCTCCATCAATGAGGTATCTTCTTTAGTGGTGGTATGTAATG  
GAACTTAGCCATTTTTCAAAGCAATTGAAATGCATTGCTCTGGATCTGTTTCTTGGCAGTGGACTCAGAAAAGCCA  
ACATGTGGCTCCTCCAGCCCATACCAAGTATTTTGTCTGCTTCTGAATACAAATTGGTTGGTTTTGACTTCAGA

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**FIGURE 3903B**

TTGAACTTACTGTAGCCTCAGATGATTCCCCCTCCGCCTCCAGGAAGAAAGAATGTTACTGCCTTAATAAAAA  
ATGAAAAGAGAATGATGCTCAAAATCTTCCAAATAAAATGTTCCCTAT



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**FIGURE 3904**

AAAGCGAGAGTGAGTGGGACCGGAGGGGCGGGGCATCATATGGGCGGGGCTGAGGCGAGGCCCCGGCGGCCATCT  
TGAGCCCCGCCTTTTACTTCGGCCCCGCTTCTTCTGGTCACTCCGCCACCGTAGAATCGCCTACCATTTGGTGCAA  
GCAAAAAGCAATCAGCAATTGGACAGGAAAAGAAATGGCATTGAAGCAGATTTCCAGCAACAAGTGCTTTGGGGGA  
TTGCAGAAAGTTTTTGAACATGACAGTGTTGAACTAACTGCAAAATGAAATTTGCTGTCTACTTACCACCAAAG  
GCAGAAACAGGAAAGTGCCCTGCACTGTATTGGCTCTCAGGTTTAACTTGACAGAGCAAAATTTTATATCAAAA  
TCTGGTTATCATCAGTCTGCTTCAGAACATGGTCTTGTGTCATTGCTCCAGATACCAGCCCTCGTGGCTGCAAT  
ATTAAAGGTGAAGATGAGAGCTGGGACTTTGGCACTGGTGCTGGATTTTATGTTGATGCCACTGAAGATCCTTGG  
AAAACCAACTACAGAATGTACTCTTATGTACAGAGGAGCTTCCCCAACTCATAAATGCCAATTTTCCAGTGGAT  
CCCCAAAGGATGTCTATTTTTGGCCACTCCATGGGAGGTCATGGAGCTCTGATCTGTGCTTTGAAAAATCCTGGA  
AAATACAAATCTGTGTCAGCATTTGCTCCAATTTGCAACCTGTACTCTGTCCCTGGGGCAAAAAAGCCTTTAGT  
GGATATTTGGGAACAGATCAAAGTAAATGGAAGGCTTATGATGCTACCCACCTTGTGAAATCCTATCCAGGATCT  
CAGCTGGACATACTAATTGATCAAGGGAAAGATGACCAGTTTCTTTTAGATGGACAGTTACTCCCTGATAACTTC  
ATAGCTGCCTGTACAGAAAAGAAAATCCCCGTTGTTTTTCGATTGCAAGAGGGTTATGATCATAGCTACTACTTC  
ATTGCAACCTTTATTACTGACCACATCAGACATCATGCTAAATACCTGAATGCATGAAAAAACTCCAAATAAGAG  
AATCTCTTCAGGATTATAAAAGTTGTAAAAATGCAACTGTATTGCTGAGCAAAAAAAAAAAAAATTCAAAACATTG  
GATTTTATAGTGCTAAAAGGGCTTTATTCTATAGTTGAATCACCTCTGAATAAAGATATAAAACCT

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**FIGURE 3905**

MALKQISSNKCFGGLQKVFEHDSVELNCKMKFAVYLPPKAETGKCPALYWLSGLTCTEQNFISKSGYHQSASEHG  
LVVIAPDTSPRGCNIGEDSWDFGTGAGFYVDATEDPWKTNYRMYSYVTEELPOLINANFPVDPQRMSIFGHSM  
GGHGALICALKNPGKYKSVSAFAPICNPVLCPWGKKAFSGYLGTDQSKWKAYDATHLVKSYPGSQLDILIDQGKD  
DQFLLDGQLLPDNFIAACTEKKIPVVFRLQEGYDHSYYFIATFITDHIRHHAKYLNA

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**FIGURE 3906**

GGCCGGTGGCGGGACTCTGGGGAAAATGGCTGCGTCTTCGAGTGGTGAGAAGGAGAAGGAGCGGCTGGGAGGCGG  
TTTGGGAGTGGCGGGTGGTAACAGCACACGAGAGCGGCTGCTGTCTGCGCTTGAGGACTTGGAGGTCCTGTCTAG  
GGAACTTATAGAAATGCTGGCAATTTCAAGAAACCAAAAGTTGTTACAGGCTGGAGAGGAAAACAGGTCCTGGA  
GTTGTTAATTCACCGAGATGGGGAATTTCAAGAACTAATGAAATTGGCACTTAATCAGGGAAAAATTCATCATGA  
AATGCAAGTTTTAGAAAAAGAAGTAGAGAAGAGAGACAGTGATATTCAGCAGCTACAAAAACAGCTAAAGGAAGC  
AGAACAAATACTGGCAACAGCTGTTTACCAAGCGAAGGAGAACTCAAGTCAATAGAAAAAGCAAGAAAAGGTGC  
TATCTCCTCTGAAGAAATAATTAAGTATGCACATAGGATCAGTGCAAGTAATGCTGTATGTGCTCCACTGACCTG  
GGTTCCAGGGGACCCCGGAGACCCTACCCAAGTATTTAGAGATGAGAAGTGGGTTACTGGGTCAGATGAACAA  
TCCTTCCACTAATGGCGTGAATGGCCATTTACCAGGAGATGCACCTTGCAGCAGGAAGATTGCCAGATGTCCTTGC  
TCCACAGTATCCATGGCAGTCAAATGACATGTGATGAATATGTTACCACCAAATCATAGTAGTACTTTTTGTT  
GGAACTCCTGGGCATAATAAAGAAAATGAAGATGATGTAGAGATTATGTCAACGGACTCCTCAAGCAGTAGTAG  
TGAGTCTGATTGAAAAACTTAAAAGACAATATACAGAATTGAATACTGTAGAATTCTGTTTCTTTAACAGTAGCA  
GGGAAATGTAAACTACAGGTGACAAAAATACCCAGGTAAACACTGGCTTTGGTAGAATTGTGCAGTCATTAAAA  
GTCAAAATTTTTTGACTTTCITTTTTAAAGCCAAAGACCATAGTTTTAGTTTTAAGCCACTAGGTAGATATTTAGG  
GGAATAGTCAAAATTTACTGTTGAAAAAGCAGTTGCTATGTGCTTTCTTACCCTGTTCTGTTCAGTTTTGCTGG  
ATTTGTACATAGCCATTCTAGAAATAGAGTTGAGGGAAATTATCCATATACATATCACTAATAGGCTTCTTGGA  
TTATTTAGAAAAGCATTTTTAACTGGCAGTGGATGACTGAATAGGCATCATATTTCTTTTGTGTGTCATTTAA  
AAGTAACAAAACTGCCATTTGACAGTAAAGGCTCTTGGCTTCTGTTGGAGGCATGGGAAATTGTCTCAATTTGT  
ACAGTTTGTAATTGTAATTTTTGTAAATAAATTTGTTTGATATTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3907**

MAASSSGEKEKERLGGGLGVAGGNSTRERLLSALEDLEVLRSRELIEMLAISRNQKLLQAGEENQVLELLIHRDGE  
FQELMKLALNQGKIHHEMQVLEKEVEKRDSDIQQLQQLKEAEQILATAVYQAKEKLKSIEKARKGAISSEEI IK  
YAHRIASNAVCAPLTWVPGDPRRPYPTDLEMRSGLLGQMNPNSTNGVNGHLPGDALAAGRLPDVLPAPQYPWQSN  
DMSMNMLPPNHSSDFLLEPPGHNKENEDDVEIMSTDSSSSSESSED

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**FIGURE 3908**

GCGAGATCCCTACCGCAGTAGCCGCCTCTGCCGCCGCGGAGCTTCCCGAACCTCTCAGCCGCCCGGAGCCGCTCC  
CGGAGCCCGGCCGTAGAGGCTGCAATCGCAGCCGGGAGCCCGCAGCCCGCGCCCCGAGCCCGCCGCCCTTCG  
AGGGCGCCCCAGGCCGCGCCATGGTGGAAGGTGACGTTCAACTCCGCTCTGGCCAGAAAGGAGGCCAAGAAGGACG  
AGCCCAAGAGCGGCGAGGAGGCGCTCATCATCCCCCGACGCCGTCGCGGTGGACTGCAAGGACCCAGATGATG  
TGGTACCAGTTGGCCAAAGAAGAGCCTGGTGTGGTGCATGTGCTTTGGACTAGCATTATGCTTGCAGGTGTTA  
TTCTAGGAGGAGCATACTTGTACAAATATTTTGCACCTCAACCAGATGACGTGTACTACTGTGGAATAAAGTACA  
TCAAAGATGATGTATCTTAAATGAGCCCTCTGCAGATGCCCCAGCTGCTCTCTACCAGACAATTGAAGAAAATA  
TTAAATCTTTGAAGAAGAAGAAGTTGAATTTATCAGTGTGCCTGTCCCAGAGTTTGCAGATAGTGATCCTGCCA  
ACATTGTTTCATGACTTTAACAAGAACTTACAGCCTATTTAGATCTTAACCTGGATAAGTGCTATGTGATCCCTC  
TGAACACTTCCATTGTTATGCCACCCAGAAACCTACTGGAGTTACTTTATTAACATCAAGGCTGGAACCTATTTGC  
CTCAGTCCCTATCTGATTCATGAGCACATGGTTATTACTGATCGCATTGAAAACATTGATCACCTGGGTTTCTTTA  
TTTATCGACTGTGTATGACAAGGAACTTACAACTGCAACGCAGAGAACTATTAAAGGTATTCAGAAACGTG  
AAGCCAGCAATTGTTTCGCAATTCGGCATTTTGAAAACAAATTTGCCGTGGAACTTTAATTTGTTCTTGAACAG  
TCAAGAAAAACATTATTGAGGAAATTAATATCACAGCATAACCCACCCTTTACATTTTGTGCAGTGATTATTT  
TTTAAAGTCTTTCTTTTCATGTAAGTAGCAAACAGGGCTTTACTATCTTTTCATCTCATTAAATCAATTAACCCT  
TACCTTAAATTTTTTTCTTTTCGAAGTGTGGTGTCTTTTATATTTGAATTAGTAACTGTATGAAGTCATAGATAA  
TAGTACATGTCACCTTAGGTAGTAGGAAGAATTACAATTTCTTTAAATCATTATCTGGATTTTATGTTTTATT  
AGCATTTTCAAGAAGACGGATTATCTAGAGAATAATCATATATATGCATACGTAAAAATGGACCACAGTGACTTA  
TTTGTAGTTGTTAGTTGCCCTGCTACCTAGTTTGTAGTGCATTTGAGCACACATTTAATTTTCCTCTAATTAA  
AATGTGCAGTATTTTCAGTGTCAAATATATTTAACTATTTAGAGAATGATTTCCACCTTTATGTTTAAATATCCT  
AGGCATCTGCTGTAATAATATTTTAGAAAATGTTTGAATTTAAGAAATAACTTGTGTTACTAATTTGTATAACC  
CATATCTGTGCAATGGAATATAAATATCACAAAGTTGTTTAACTAGACTGCGTGTGTTTTCCCGTATAATAAA  
ACCAAAGAATAGTTTGGTTCTTCAAATCTTAAGAGAATCCACATAAAAGAAGAACTATTTTTTAAAAATTCAC  
TCTATATATACAATGAGTAAATCACAGATTTTTCTTTAAATAAAAAATAAGTCATTTTAATAACTAAACCAGAT  
TCTTTGTGGATACTATTAAAGTAACATTTAAGCCTCAACCTTG

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**FIGURE 3909**

MVKVTFNSALAQKEAKKDEPKSGEEALIIPDAVAVDCKDPDDVVPVGQRRAWCWCFCGLAFMLAGVILGGAYL  
YKYFALQPDDVYYCGIKYIKDDVILNEPSADAPAALYQTIEENIKIFEEEEVEFISVPVPEFADSDPANIVHDFN  
KKLTAYLDLNLDKCYVIPLNTSIVMPPRNLELLINIKAGTYLPQSYLIHEHMTDRIENIDHLGFFIYRLCHD  
KETYKLQRRETIKGIQKREASNCFAIRHFENKFAVETLICS

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**FIGURE 3910**

TTTAGTAAATCACACAAAAATCCAGCAGAAATTGTGAAAATCCTGAAAGACAATTTGGCCATTTTGAAAAGCAA  
GACAAAAAGACAGACAAGGCTTCAGAAGAAGTGTCTAAATCACTGCAAGCAATGAAAGAAATTCGTGTGGTACA  
AACGAGAAAGAACCCCAACAGAAGCAGTGGCTCAGCTAGCACAAGAACTCTACAGCAGTGGCCTGCTGGTGACA  
CTGATAGCTGACCTGCAGCTGATAGACTTTGAGGGAAAAAAGATGTGACCCAGATATTTAACAAATCCTTGAGA  
AGACAGATAGGCACTCGGAGTCCTACTGTGGAGTATATTAGTGCTCATCCTCATATCCTGTTTATGCTCCTCAA  
GGATATGAAGCCCCACAGATTGCCTTACGTTGTGGGATTATGCTGAGAGAATGTATTGACATGAACCACTTGTC  
AAAATCATCCTCTTTTCTAATCAATTCAGAGATTTCTTTAAGTACGTGGAGTTGTCAACATTTGATATTGCTTCA  
GATGCCCTTTGCTACTTTCAAGGATTTACTAACCAGACATAAAGTGTTGGTAGCAGACTTCTTAGAACAAAATTAC  
GACACTATTTTTGAAGACTATGAGAAATTGCTTCAGTCTGAGAATTATGTTACTAAGAGACAGTCTTTAAAGCTG  
CTAGGGGAGCTGATCCTGGACCGTCACAACCTTTGCCATCATGACAAAGTATATCAGCAAGCCGGAGAACCTGAAA  
CTCATGATGAACCTCCTTCGGGATAAAAGTCCCAACATCCAGTTTGAAGCCTTTCATGTTTTAAGGTGTTTGTG  
GCCAGTCCTCACAAAACACAGCCTATTGTGGAGATCCTGTTAAAAAATCAGCCCAAACTCATTGAGTTTCTGAGC  
AGCTTCCAAAAAGAAAGGACGGATGATGAGCAGTTCGCTGACGAGAAGAACTACTTGATTAAACAGATCCGAGAC  
TTGAAGAAAACGGCCCCCTTGAAGAGCTCCCCGGCCCCGTGTACAGTCAGTCGTCCTCATTGTCCAGTTTGTACAG  
TGTGTCATTTAGAAAGTCATCATTCTTGGGAAGACTTTGGAGGTGCCTATTTTTCTGCTGTAATTGTTCTGGG  
TAGATGGAGTATAAACATTTGAATGGAAAAAATTAACCTAGAATAATATATTCATTTTAGTCAAGTCTGTGATT  
ATTTATGTGAAATGAGAACCATTGTATCAGATGTTGATAAAAGCAATTTAACTTGCAGATGTGAGCCCCCTGGGC  
ACAATGAGCCGCTAAATGGGAGCTCAATTGACAGGCATCACCAAGTCTTCAAGGAGGACTGAGTTCTCAGGGGAG  
AACTGGGAATGGGGCCAGGGTGCAAAAATGCTTTGCCCATCTGTAGGTAGACACACAGATCGCTCAGGGCACTGA  
GAGATCCCAGAAGGTAACGTTAATGTTTTAGTCATTGTGTGTCCTTTGTTGCTGCCAATGTCTTTGGACTGTAA  
TCAGTGCAATCCACACCTCCCAGGATCCAGTGCTCCCTCTCAGCTCAGTCTCCCTCTCTCCCTGTCTGCAATTC  
ATCCCAGCTCCTCAGCATGGCCTCAGTGGGCGCACCCATGCCTCCCGCAGTCCAGGTGAGCAGGGGAGCAACTGA  
GCAGGAAGAGGATGGATCAACAAGGGTCACGGGGAATAGGGGACCCACGGGGTGTGACCTGCTTGCTAGAGA  
GTGAACATGTGGCTCTGGATAGAGTGACTGCTGCTCCATATTAGCTTCCAGAGGGTGAGTGAGGGACAGAATATT  
TCCTTCATAATGGTCATGGGTGAATGCTTTCTGCTGTAAGTGTCTTTTAGAGTAGGAATCAGCATAGTGGGATGC  
CCAGCAGGCACAAACCATGGGTCCAGGGAGTCTCAGCGGGGAACCTCTATCAGTATCAATAACCATTTGAAGGAG  
AAATGATTCATGTGTGAAAAAATTCAGATCCATCAATAAATTTTTTTCAG

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**FIGURE 3911**

MKEILCGTNEKEPPTEAVAQLAQELYSSGLLVTLIADLQLIDFEGKKDVTQIFNNILRRQIGTRSPTVEYISAHP  
HILFMLLKGYEAPQIALRCGIMLRECIRHEPLVKIILFSNQFRDFFKYVELSTFDIASDAFATFKDLLTRHKVLV  
ADFLEQNYDTIFEDYEKLLQSENYVTKRQSLKLLGELIDRHNFAIMTKYISKPENLKLMMNLLRDKSPNIQFEA  
FHVFKVVFVASPHKTQPIVEILLKNQPKLIEFLSSFQKERTDDEQFADEKNYLIKQIRDLKKTAP



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**FIGURE 3912**

CACAAAGGCACCAAACCACAAAACGTCACACGTAAACATCATACGTGGCAACCACAAGCCAATCAGTTGGATATT  
TCATTCAATTGGTATACATATGGACTGTAAGGTGTCCTTTAGGTTGCAGAAAAGATGGAAAAAGGACATGTGCAC  
TCTGCCCCAAAGATGTGCAATATAATGTCTGTACTTTGCACAATCAGAGAATATAGCTGCTCATGAGAATTGTT  
TGCTGTATTCTTCAGGACTTGTGGAATGTGAGGATCAGGATCCACTTAATCCTGATAGAAGTTTGTATGTGGAAT  
CAGTAAAGAAAGAAATCCAGAGAGGAAGGAAGTTGAAATGCAAAATTTTGTATATAAGAGGAGCCACCGTGGGAT  
GTGATTTAAAAAACTGTAACAAGAATTACCACTTTTTCTGTGCCAAGAAGGACGACGCAGTTCCACAGTCTGATG  
GAGTTCGAGGAATTTATAAACTGCTTTGCCAGCAACATGCTCAATCCCGATCATCGCTCAAAGTGCTAAATTTT  
CAGGAGTGAAAAGAAAAAGAGGAAGGAAGAAACCCCTCTCAGGCAATCATGTACAGCCACCCGAAACAATGAAAT  
GTAATACATTCATAAGACAAGTGAAAGAAGAGCATGGCAGACACACAGATGCAACTGTGAAAGTTCCTTTTCTTA  
AGAAATGCAAGGGAAGCAGGACTTCTTAATTACTTACTTGAAGAAATATTAGACAAAGTTCATTCAATTCAGAA  
AACTCATGGATGAGACTTACTTCAGAATCAGACTATGAAGAAATCGGGAGTGCACTTTTGTACTGTAGATTGTT  
CGAAGACACATTTGTAAATTTTCAAGCAGCAATAGAGAAAAAAATTCATGCATCTCAACAAAGGTGGCAGCAGTT  
GAAGGAAGAGATTGAGCTACTTCAGGACTTAAAACAAACCTTGTGCTCTTTTCAAGAAAATAGAGATCTTATGTC  
AAGTTCTACATCAATATCATCCCTGTCTTATTAGGGATTACCATTTTCTAAGCCAAGAGTCATGTCAAATTGCAA  
TCAGGCTCAAAACCAGAGACCAGGCTGTGAAATCCACACATCTTTAGAACTAGTCGTCTCCTCTTGGCCTCAGCA  
GCTCTTCCCTGTCTTACTGGTTGACATTTTGATCACTCTTGCACACTCTTGTGTTTTTGTCTCACTGTACAC  
TCCCAGCACCTAGTATGCTCAGTAAATGTTTGTGGAATAAGTCATAAAATGTTCTTAACCTTTGATTCTACTTA  
CAGCCCATGATAGCCTCTTAGATATAATAAATTTGGATTATACTAAAA

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**FIGURE 3913**

MEKRTCALCPKDVEYNVLYFAQSENIAAHENCLLYSSGLVECEDQDPLNPDRSFDVESVKKEIQRGRKLKCKFCH  
KRGATVGC DLKNCNKNYHFFCAKKDDAVPQSDGVRGIYKLLCQQHAQFP IIAQSAKFSGVKRKRGRKKPLSGNHV  
QPPETMKCNTFIRQVKEEHGRHTDATVKVPFLKKCKGSRTS

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**FIGURE 3914**

TTGCTTTCTCTGCCGCATGGTCCTGGGCCGTTGGCGTCGGAAGCCTGAAGCATGGGCGCTGAGTGGGAGCTGGG  
GGCCGAGGCTGGCGGTTTCGCTGCTGCTGTGCGCCGCGCTGCTGGCGGCGGGCTGCGCCCTGGGCCTGCGCCTGGG  
CCGCGGGCAGGGGGCGGCGGACCGCGGGCGCTCATCTGGCTCTGCTACGACGCGCTGGTGCACTTCGCGCTGGA  
AGGCCCTTTTGTCTACTTGTCTTTAGTAGGAAACGTTGCAAATTCGATGGCTTGATTGCTTCTTTATGGAAAGA  
ATATGGCAAAGCTGATGCAAGATGGGTTTATTTTGATCCAACCATTGTGTCTGTGGAAATTCTGACCGTCGCCCT  
GGATGGGTCTCTGGCATTGTTCCCTCATTTATGCCATAGTCAAAGAAAAATATTACCGGCATTTCCTGCAGATCAC  
CCTGTGCGTGTGCGAGCTGTATGGCTGCTGGATGACCTTCCTCCCAGAGTGGCTCACCAGAAGCCCCAACCTCAA  
CACCAGCAACTGGCTGTACTGTTGGCTTTACCTGTTTTTTTTTAACGGTGTGTGGGTTCTGATCCCAGGACTGCT  
ACTGTGGCAGTCATGGCTAGAACTCAAGAAAATGCATCAGAAAGAAACCAGTTCAGTGAAGAAGTTTCAGTGAAC  
TTTCAAACCATAAACACCATTATCTAACTTCATGAACCAGAATGAATCAAATCTTTTTGTTTGGCCAAAATGTA  
ATACATTCCAGTCTACACTTTGTTTTTGTATTGTTGCTCCTGAACAACCTGTTTCAAATTGGTTTTAAGGCGACC  
AGTTTTCGTTGTATTGTTGTTCAATTAAATGGTGATATAGGGAAGAGAACAAATTTGAATTTGTAATAATAAA  
ATGTTTAATTATACAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3915**

MGAEWELGAEAGGSLLLCAALLAAGCALGLRLGRGQGAADRGALIWLCDALVHFALEGPFVYLSLVGNVANS DG  
LIASLWKEYGKADARWVYFDPTIVSVEILTVALDGSALFLIYAIVKEKYRHFLOITLCVCELYGCWMTFLPEW  
LTRSPNLNTSNWLYCWLYLFFFNQVWVLIPGLLLWQSWLELKKMHQKETSSVKKFQ

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**FIGURE 3916**

GCCATTTTGTATGCCAAGAGGGCCAGTGTCTTCGTCAAATTACAGAAGCCAAATGCAGCCATCCGAGACTGTGAC  
AGAGCCATTGAAATAAATCCTGATTCAGCTCAGCCTTACAAGAGGCGGGGAAAGCACACAGGCACAGAAAATTG  
CAGAACATCAGAGAAAGTATGAGCGAAAACGTGAAGAGTGAGAGATCAAAGAAAGAATAGAACGAGTTAAGAAGG  
CTCGAAAAGAGCATGAGAGAGCCCAGAGGGAGGAAGAAGCCAGATGACAGTCAGGAGCTCAGTATGGCTCTTTTC  
CAGGTGGCTTTCTGGGGGAATGCCTGGTAATTTCTGGAGGAATGGCTGGAATGGGAGGGGGCATACCTGGAA  
TGGCCGGAATGCCTGGACTCAATGAAATTCTTAGTGATCCAGAGGTTCTTGCAGCCATGCAGGATCCAGAAGTTA  
TGGTGGCCTTCCAGGATGTGGCTCAGAACCCAGCAAATATGTCAAAGTACCAGAGCAACCCAAAGGTTATGAATC  
TCATCAGTAAATTGTCAGCCAAA

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**FIGURE 3917**

GCCGACGTAGACCCTGCTCTGCACGCCAGCCCGCCCCGCACCCACCATGGCCACAGTTCAGCAGCTGGAAGGAAGA  
TGGCGCCTGCTGGACAGCAAAGGCTTTGATGAATACATGAAGGAGCTAGGAGTGGGAATAGCTTTGCAAAAAATG  
GGCGCAATGGCCAAGCCAGATTGTATCATCACTTGTGATGGCAGAAACCTCACCACAAAAACCGAGAGCACTTTG  
AAAAACAACACAGTTTTCTTGTACCCTGGGAGATGAGTTGAAGAAACCACAGCTGATGGCAGAAAAACACAGACT  
GTCTGCAACTTTACAGATGGTGCATTGGTTCAGCATCAGGAGTGGGATGGGAAGGAAAGCACAATAACAAGAAAA  
TTGAAAGATGGGAAATTAGTGGTGGAGTGTGTATGAACAATGTCACCTGTACTCGGATCTATGAAAAAGTAGAA  
TAAAAATTCCATCATCACTTTGGACAGGAGTTAACTAAGAGAATGACCAAGCTCAGTTCAATGAGCAAATCTCCA  
TACTGTTTCTTTCTTTTTTTTTTTCATTACTGTGTTCAATTATCTTTATCACAAACATTTTACATGCAGTTATTTT  
AAAGTGIGTTGGATTAATTAGGATTATCCCTTTGTTTAATAAAT

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**FIGURE 3918**

TTTCTGCCCCGTGGACGCCGCTGAAGAAGCATCGTTAAAGTCTCTCTTCACCTTGCCGTCATGTCTAAGTCAGCGT  
CTCCAAAAGAGCCCCGAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGAGCTTTGAAACAACCTGATGAGAGCCTGA  
GGAGCCATTTTGGACAAATGGGGAACGCTCACAGACTGTGTGGTAATGAGAGATCCAAACACCAAGCGCTCCAGGG  
GCTTTGGGTTTGTACATATGCCACTGTGGAGGAGGTGGATGCAGCTATGAATACAACGCCACACAAGGTGGATG  
GAAGAGTTGTGGAACCAAAGAGAGCTGTCTCCAGAGAAGATTCTCAAAGACCAGGTGCCCACTTAAGTGTGAAAA  
AGATATTTGTTGGTGGCATTAAAGAAGACACTGAAGAACATCACCTAAGAGATTATTTGAACAGTATGGAAAA  
TTGAAGTAATTGAAATCATGACTGACCGAGGCAGTGGCAAGAAAAGGGGCTTTGCCTTTGTAACCTTTGACGACC  
ATGACTCCGTGGATAAGATTGTCAATTCAGAAATACCATACTGTGAAGGGCCACAACCTGTGAAGTTAGAAAAGCCC  
TGCCAAAGCAAGAGATGGCTAGTGCTTCATCCAGCCAAAGAGGTCGAAGGGGTTCTGGAACTTTGGTGGTGGTC  
GTGGAGATGGTTTCGGTGGGAATGACAACTTTGGTCGTGGAGGAACTTCAGTGGTCGTGGTGGCTTTGGTGGCA  
GCTGTGGTGGTGGTGGATATGGTGGCAGTGGGGATGGCTATAATGGATTGGTAATGATGGAAGCAATTTGGAG  
GTGGTGAAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTGGACCCATGAAGGGAGGAAAT  
TTGGAGGCAGAAGCTCTGGCCCCATGGCGGTGGAGGCCAATACTTTGCAAAACCACAAAACCAAGGTGGCTATG  
GCGTTTCCAGCAGCAGCAGTAGCTATGGCAGTGGCAGAAGATTTTAATTAGGAAACAAAGCTTAGCAGGAGAGGA  
GAGCCAGAGAAGTGACAGGGAAGCTACAGGTTACAACAGATTGTGAACTCAGCCAAGCACAGTGGTGGCAGGGC  
CTAGCTGCTACAAAGAAGACATGTTTTAGACAAATACTCATGTGTATGGGCAAAAACTCGAGGACTGTATTTGT  
GACTAATTGTATAACAGGTTATTTTAGTTCTGTCTGTGGAAAGTGTAAGCATTCCAACAAAGTGTTTTAATG  
TAGATTTTTTTTTTGCACCCATGCTGTTGATTGCTAAATGTAATAGTCTGATTGTGACGCTGAATAAATGTCT

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**FIGURE 3919**

MSKSASPKEPEQLRKLFIGGLSFETTTDESLRSHFEQWGTLTDCVVMRDPNTRSRGFGFVTYATVEEVDAAMNTT  
PHKVDGRVVEPKRAVSREDSQRFGAHLTVKKIFVGGIKEDTEEHHLRDYFEQYGKIEVIEIMTDRGSGKKRGFAF  
VTFDDHDSVDKIVIQKYHTVKGHNCEVRKALPKQEMASASSSQRRGSGNFGGGRGDGFGGNDNFGRGGNFSGR  
GGFGGSCGGGGYGGSGDGYNGFGNDGSNFGGGGSYNDFGNYNQSSNFGPMKGGNFGGRSSGPYGGGGQYFAKPQ  
NQGGYGVSSSSSSYGSGRRF



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**FIGURE 3920**

ACCTTGCCGTCATGTCTAAGTCAGCGTCTCCAAAAGAGCCCGAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGA  
GCTTTGAAACAACCTGATGAGAGCCTGAGGAGCCATTTTGAGCAATGGGGAACGCTCACAGACTGTGTGGTAATGA  
GAGATCCAAACACCAAGCGCTCCAGGGGCTTTGGGTTTGTACATATGCCACTGTGGAGGAGGTGGATGCAGCTA  
TGAATACAACGCCACACAAGGTGGATGGAAGAGTTGTGGAACCAAAGAGAGCTGTCTCCAGAGAAGATTCTCAA  
GACCAGGTGCCCACTTAACGTGAAAAAGATATTTGTTGGTGGCATTAAAGAAGACACTGAAGAACATCACCTAA  
GAGATTATTTGAAACAGTATGGAAAAATTGAAGTAATTGAAATCATGACTGACCGAGGCAGTGGCAAGAAAAGGG  
GCTTTGCCTTTGTAACCTTTGACGACCATGACTCCGTGGTGGCTTTGGTGGCAGCTGTGGTGGTGGTGGATATGG  
TGGCAGTGGGGATGGCTATAATGGATTTGGTAATGATGGAAGCAATTTTGGAGGTGGTGAAGCTACAATGATT  
TGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGG

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**FIGURE 3921**

TGTAGTGGAACCAAAGAGAGCTGTTTCTAGAGAGGATTCTGTAAAGCCCGTTGCCCATCTAACAGTGAAGAAAAT  
TTTTGTTGGTGGTATTAAAGAAGATACAGAAGAATATAATTTGAGAGACTACTTTGAAAAGTGTAGCAAGATTGA  
AACCATAGAAGTTATGGAAGACAGGCAGAGTGGAAAAAGAGAGGATTTGCTTTTGTAACTTTGTATGATCATGA  
TATAATTGATAAAATTGTTGTTTCAGAAATACCACACTATTAATGGGCATAATTGTGAAGTGAAAAAGGCCCTTTC  
TAAACAAGAGATGCAGTCTGCTGGATCACAGAGAGGTCATGGAGGTGGATCTGGCAATTTATGGGTCGCGGAGG  
AAACTTTGGAGGTGCTGGAGGTAATTTTGGCCTTGGTGGAACTTTGGTGGAAAGAGGAGGCTATGGTGGTGGAGG  
TGGTGGCAGCAGAGGAAGTTATGGAAGAGGTGATGGTGGATATAATAGATTTGGACGTGACGGTGGCAACTATGG  
TGGTGGTCCTGGTTATAGTAGTAGAGGGGGCTATGGTGGTGGTGGAAACAGGATATGGAAACCAAGGTGGTGGATA  
TGGTGGAGGTGGTGGAGGATATGATGGTTACAATGAAGGAGGAAATTTGGCGGTGGTAACTATGGTGGTGGTGG  
GAACTATAATGATTTTGGAAATCATAGTGGACAACAGCAATCAAATTATGGACCATGAAAGGGGGCAGTTTGG  
TGGAAGAAGCTCGGGCAGTCCCTATGGTGGTGGTTATGGATCTGGTGGTGGAAAGTGGTGGATATGGTAGCAGAAG  
GTTCTAAAAACAGCAGAAAAGGGCTACAGTTCTTAGCAGGAGAGAGAGCAAGGAGTTGTCAGGAAAGCTGCAGGT  
TACCTCGAGAGAGTTGTCCCAAATGCATTAGAGGAACGTAAAAATCTGCCACAGAAGGAACAATGATCCATAGT  
CAGAAAATTTACTGCAGCTTAAACAGGAAACCCTTCTTGTTCAGGACTCTCATAGCCACAGTTGCAAAAAGTGC  
AGCTATTGATTAATGCAATATAGTGTCAACTAGATGTAGATTCCTGAGGTCTTTTATCTGTTGTAGCTTTGTCTT  
TTCTTTTTCTTTTCATTACATCAGGTATATTGCCCTGTAAATTGTGGTAGTGGTACCAGGAATAAAAAATTAAG  
GAATTTTAACTTTTCAA

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**FIGURE 3922**

MEDRQSGKKRGFAFVTFDDHDIIDKIVVQKYHTINGHNCEVKKALSKQEMQSAGSQRGHGGGSGNFMGRGGNFGG  
AGGNFGLGGNFGGRGGYGGGGGSRGSYGRGDGGYNRFGRDGGNYGGGPGYSSRGGYGGGGTGYGNQGGGYGGGG  
GGYDGYNEGGNFGGGNYGGGGNYNDFGNHSGQQQSNYGPMKGSFGRSSGSPYGGGYSGGGSGGYGSRRF

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**FIGURE 3923**

GGTACGTGCGCTCGCGGTTCTCTCGCGGAGGTGGCGGTGGCGGGAGCGGGCTCCGGAGAGCCTGAGAGCACGGT  
GGGGCGGGGCGGGAGAAAGTGGCCGCCCGGAGGACGTTGGCGTTTACGTGTGGAAGAGCGGAAGAGTTTGCTTT  
TCGTGCGCGCCTTCGAAAACCTGCCTGCCGCTGTCTGAGGAGTCCACCCGAAACCTCCCTCCTCCGCCGCGAGCC  
CCGCGCTGAGCTCGCCGACCCAAGCCAGCGTGGGCGAGGTGGGAAGTGCGCCCGACCCGCGCCTGGAGCTGCGCC  
CCCGAGTGCCCATGGCTACAAGGGTGCTGAGCATGAGCGCCCGCCTGGGACCCGTGCCCCAGCCGCGCGCGCCG  
AGGACGAGCCGGTGTTCGCGCAGCTCAAGCCGGTGCTGGGCGCCGCGAATCCGGCCCCGCGACGCGCGCTCTTCC  
CCGGCGAGGAGCTGAAGCACGCGCACCCGCCCGCAGGCGCAGCCCGCGCCCGCGCAGGCCCCGAGCCGGCCCC  
AGCCGCCCCGCCACCGCCCCGCGGCTGCCTCCAGAGGACCTGGTCCAGACAAGATGTGAAATGGAGAAGTATCTGA  
CACCTCAGCTTCTCCAGTTCTATAATTCCAGAGCATAAAAAGTATAGACGAGACAGTGCCTCAGTCGTAGACC  
AGTTCTTCACTGACACTGAAGGTTACCTTACAGTATCAACATGAACGTCTTCTCCCTGACATCACTCACCTGA  
GAACTGGCCTCTACAAATCCCAGAGACCGTGCCTAACACACATCAAGACAGAACCTGTTGCCATTTTCAGCCACC  
AGAGTGAACGACTGCCCCCTCTCCGGCCCCGACCCAGGCCCTCCCTGAGTTCACCAAGTATATTACAGTCAACACC  
AGACCGCAGCTCCAGAGGTGAACAATATTTTATCAAACAAGAACTTCTACACCAGATCTTCATCTTTCTGTCC  
CTACCCAGCAGGGCCACCTGTACCAGCTACTGAATACACCGGATCTAGATATGCCAGTTCTACAAATCAGACAG  
CAGCAATGGACACTCTTAATGTTTCTATGTCTAGCTGCCATGGCAGGCTTAACACACACACCTCTGCTGTTCCGC  
AGACTGCAGTGAACAATTCAGGGCATGCCCCCTTGACATACACAATGCCAAGTCAGTTCTTCCACAACAGG  
CCACTTACTTTCCCCCGTCACCACCAAGCTCAGAGCCTGGAAGTCCAGATAGACAAGCAGAGATGCTCCAGAATT  
TAACCCACCTCCATCTATGCTGCTACAATTGCTTCTAACTGGCAATTCACAATCCAATTTACCCACCAACC  
TGCCAGTTAACTCACAAAACATCCAACCTGTCAGATACAATAGAAGGAGTAACCCCGATTGGAGAAACGACGCA  
TCCACTACTGCGATTACCCTGGTTGCACAAAAGTTTATACCAAGTCTTCTCATTTAAAAGCTACCTGAGGACTC  
ACACTGGTGAAGCCATACAAGTGACCTGGGAAGGCTGCGACTGGAGGTTGCGCGCATCGGATGAGCTGACCC  
GCCACTACCGGAAGCACACAGGCGCCAAGCCCTTCCAGTGCGGGGTGTGCAACCGCAGCTTCTCGCGCTCTGACC  
ACCTGGCCCTGCATATGAAGAGGCACCAGAACTGAGCACTGCCCCGTGTGACCCGTTCCAGGTCCCCCTGGGCTCCC  
TCAAATGACAGACCTAACTATTCTGTGTAAAAACAACAAAACAAAAGCAAGAAAACCAACTAAAACT  
GGAAATGTATATTTTGTATATTTGAGAAAACAGGGAATACATTGTATTAATACCAAAGTGTGTTGGTCATTTAAG  
AATCTGGAATGCTTGCTGTAATGTATATGGCTTTACTCAAGCAGATCTCATCTCATGACAGGCAGCCAGCTCA  
ACATGGGTAAAGGGTGGGGGTGGAGGGGAGTGTGTGACGCTTTTACCTAGGCACCATCATTTAATGTGACAGT  
GTTCACTAAACAAATCAGTTGGCAGGCACCAGAAGAAGATGGATTGTATGTCAAGATTTTACTTGGCATTGAGT  
AGTTTTTTTCAATAGTAGGTAATTCCTTAGAGATACAGTATACCTGGCAATTCACAAATAGCCATTGAACAAATG  
TGTGGGTTTTTAAAAATTATATACATATATGAGTTGCCATATTTGCTATTCAAATTTTGTAAATATGCAATC  
AGCTTTATAGGTTTATTACAAGTTTTTTAGGATTCTTTTGGGAAGAGTCATAATCTTTTGAATAAACCATGA  
ATACACTTACAGTTAGGATTTGTGGTAAGGTACCTCTCAACATTACCAAAATCATTTCTTTAGAGGGAAGGAATA  
ATCATTCAAATGAACTTTAAAAAGCAAATTTTCATGCACTGATTAAAAATAGGATTATTTTAAATACAAAAGGCAT  
TTTATATGAATTATAAACTGAAGAGCTTAAAGATAGTTACAAAATACAAAAGTTCAACCTCTTACAATAAGCTAA  
ACGCAATGTCATTTTAAAAAGAAGGACTTAGGGTGTGCTTTTCACATATGACAATGTTGCATTTATGATGCAGT  
TTCAAGTACCAAAACGTTGAATTGATGATGCAGTTTTCATATATCGAGATGTTGCTCGTGCAGTACTGTTGGT  
AAATGACAATTTATGTGGATTTTGCATGTAATACACAGTGAGACACAGTAATTTTATCTAAATTACAGTGCAGTT  
TAGTTAATCTATTAATACTGACTCAGTGTCTGCCTTTAAATATAAATGATATGTTGAAAACCTTAAGGAAGCAAAT  
GCTACATATATGCAATATAAATAGTAATGTGATGCTGATGCTGTTAACCAGGGCAGAAATAAATAAGCAAAT  
GCCAAAAGGGTCTTAATTGAAATGAAAATTAATTTTGTGTTTTTAAATATTGTTTATCTTTATTTATTTTGTGG  
TAATATAGTAAGTTTTTTTGAAGACAATTTTCATAACTTGATAAATTATAGTTTTGTTTGTAGAAAAGTTGCT  
CTTAAAGATGTAAATAGATGACAAACGATGTAAATAATTTTGTAAAGAGGCTTCAAATGTTTATACGTGGAAC  
ACACCTACATGAAAAGCAGAAATCGGTTGCTGTTTTGCTTCTTTTCCCTCTTATTTTGTATTGTGGTCATTTT  
CTATGCAATAATGGAGCAAACAGCTGTATAGTTGTAGAATTTTTTGAAGAGATGAGATGTTTATATATTAACGA  
CAATTTTTTTTTTGGAAAATAAAAAGTGCCTAAAAAG

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**FIGURE 3924**

CGCCGACGCAGACCACTCTCTGCATGCCAGCCCGCCCGCACCCACCATGGCCACAGTTCAGCAGCTGGAAGGAAG  
ATGGCGCCTGGTGGACAGCAAAGGCTTTGATGAATACATGAAGGAGCTAGGAGTGGGAATAGCTTTGCGAAAAAT  
GGGCGCAATGGCCAAGCCAGATTGTATTGTCACTTGTGATGGCAAAAACCTCACCATAAAAACTGAGAGCACTTT  
GAAAACAACACAGTTTTTCTTGTCCCTGGGAGAGAAGTTTGAAGAAACCACAGCTGATGGCAGAAAAACTCAGAC  
TGTCTGCAACTTTACAGATGGTGCATTGGTTTCAGCATCAGGAGTGGGATGGGAAGGAAAGCACAATAACAAGAAA  
ATTGAAAGATGGGAAATTAGTGGTGGAGTGTGTTCATGAACCATGTCGCCTGTACTCGGATCTATGAAAAAGTAGA  
ATAAAAATTCCATCATCACTTTGGACAGGAGTTAACTAAGAGAATGACCAAGCTCAGTTCAATGAGCAAATCTCC  
ATACTGTTTCTTTTTTTTTTTTTTCCATTACTGCGTTCAATTATCTTTATCACGAACATTTTACATGCAGCTATTC  
AAAGTGTGTTGGATTAAATTAGGATCATCCCTTTGGTTAATAAATAAATGCGTTTGTGCTAATAAAAAAAGAAAAA  
GAAAAA

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**FIGURE 3925**

CGGGTGGCAGCCGCTCGCTGAGGTAGTCTCTCGCGGCGCCGGGGATCCCTGAACACAGACAGCGCGGGACTGAGA  
AGGAAAGCTTCTTTCTGGGCAGCCAGAGCCGCAAAGGTGGAGCCGCGTTGGCGCCCTCCGCGGGACCAGCGCCTC  
GGATGCGGGCGGAGCGCGGGGGGCGCGGCTGCGGGAGCGCGAAGCGGGGGGCCAGGGGCGCCTCATGTGAGAGC  
GGCGGGACCTGCAGCCGCCCGCGCTCCCCGGAGCACGGGGTGGTGTGTGGGGGAAGCCGCCCCGGCAGCAGGATG  
AAACGAGGAGGAAGAGATAGTGACCGTAATTCATCAGAAGAAGGAAGTGCAGAGAAATCCAAGAACTGAGGACT  
ACAAATGAGCATTCTCAGACTTGTGATTGGGGTAATCTCCTTCAGGACATTATTCTCCAAGTATTTAAATATTTG  
CCTCTTCTTGACCGGGCTCATGCTTCACAAGTTTGCCGCAACTGGAACCAGGTATTTACATGCCTGACTTGTGG  
AGATGTTTTGAATTTGAACTGAATCAGCCAGCTACATCTTATTTGAAAGCTACCCATCCAGAGCTGATCAAACAG  
ATTATTTAAAGACATTCAAACCATCTACAATATGTCAGCTTCAAGGTGGACAGCAGCAAGGAATCAGCTGAAGCA  
GCTTGTGATATACTATCGCAACTTGTGAATTGCTCTTTAAAAACACTTGGACTTATTTCAACTGCTCGACCAAGC  
TTTATGGATTACCAAAGTCTCACTTTATCTCTGCACTGACAGTTGTGTTCTGTAAGTCCAAATCCCTGTCTTCG  
CTTAAGATAGATGATACTCCAGTAGATGATCCATCTCTCAAAGTACTAGTGGCAACAATAGTGATACACTCAAG  
CTGTTGAAATGAGCAGCTGTCTCATGTCTCTCCAGCAGGTATCCTTTGTGTGGCTGATCAGTTACGGCTTA  
AGAGAACTAGCCCTGAACTACCACTTATTGAGTGATGAGTTGTACTTGCATTGTCTTCTGAAAAACATGTTCGA  
TTAGAACATTTGCGCATTGATGTAGTCAGTGAGAATCCTGGACAGACACACTTCCATACTATTAGAAGAGTAGC  
TGGGATGCTTTCATCAGACATTCACCCAAAGTGAACCTTAGTGATGTATTTTTTTTTATATGAAGAAGATTTGAC  
CCCTTCTTTTCGCTATGAAATACCTGCCACCCATCTGTACTTTGGGAGATCAGTAAGCAAAGATGTGCTTGGCCGT  
GTGGGAATGACATGCCCTAGACTGGTTGAACTAGTAGTGTGTGCAATGGATTACGGCCACTTGATGAAGAGTTA  
ATTGCGATTGCAGAACGTTGCAAAAATTTGTGAGCTATTGGACTAGGGGAATGTGAAGTCTCATGTAGTGCCCTT  
GTTGAGTTTGTGAAGATGTGTGGTGGCCGCTATCTCAATTATCCATTATGGAAGAAGTACTAATTCTTGACCAA  
AAGTATAGTTTGGAGCAGATTCACTGGGAAGTGTCCAAGCATCTGGTAGGGTGTGGTTTCCCGACATGATGCC  
ACTTGGTAAAACTGCATGATGAATAGCACCTTAATTTCAAGCAAATGTATTATAAATAAGTTTTATTGTCTGT  
AGTTCTGATATAATTCTACTATTTTGTGGCACAGAAATTTGATATCTTCAGTCAGTATATGTAAGATTGTTTAT  
CGGAAGACCCATGAATGAGTTTGGTGCAGAAAATCCACTTGTTCCTTAGTGTAATAGCAGTCATATCTCCGAA  
TTTTTTTTAATGTGGTTCGGATGTGAAATAACCAAGTTATACGTATTAAACAGTTTACAGTCTAAAGGAAACAAA  
CCTATATGTTATAATATCCAAGAAGTACTAATAGTTTTCTGAAATGTTATATTCTCTATGCATTTAAAAAAA  
TGTAACCTTGACATTTTAGGGTCTTCAGTTACACATACACCTGTTATAAGGTGTTAATATAGCTCAGGAAAGTG  
AGCATTTTGTGAGAAAAATGAATATATCATATCTAATGGAAAAGATTGGATGAATGTTCTCAAATGTTACAAAGC  
TGTTTTAAAGAAAAAGGTATATATAAGTAATCAGAACACTTAGAAGACTGATAGATGTCACACAGTGGTATTATAG  
AAGGATAATACAGAGCCAAGATCAAATTAAGACAATAAATGGAACAGAAGGGAGGCAGTGTTTAGCTTTGTAT  
AAACTTTTAGGTTTGCTCTGTAATCTGCTAAACCATATACATTCTTTGTGATATGTTATTATGTATGTGGCACT  
TGAGGCACTGTATGTAAAGTAAGGAATGCTTTACTAGTTCTCCTTGGTTTTATCTTTGTTAACTAGCTTTAAA  
GTATTAACAATAATTGAAATGAAAAGCTTACCTATTTTAAAAAGCCAAATTTAAATAAATATAGAAGTTTAAAA  
TGTTTATCAGTTGTTTCCATGAAAGAATATTAGTTTCCAGTAAATTTTAGTGATGGCTCACTCACTTTTCTATTT  
TGGAATTACATAGTTATGTAAAGTAAAATTTTTAAAAATCATAAAGGGAGCACCATTGTACAGTCTAGCATAAACA  
GCAAATTTTAAAGAGGACATATTTAAGTTCATAATCATATTTTTTCAGTAAATATTGCTCAGTGAAGTGGAAAAGT  
TTAATAGAAAAATGTCTGCAGTTTTGTGATTGTTAATTGGTTAAACCGATATTTTATATTATTTAAGTTAGGTA  
ACATTTTATATTACTTTTCATATGAATAAAAGTAATCCATGCATTGTAGAGTCTATAAAATGTTGAGTTTTAAAG  
ATGATATAAACTTTGATGCTGGGCACTAGTGCTAGTAGATATTACTACCTCCTGAGGGAAATCAGAAATGATTT  
AACCCCGGTGGAATACATTAATTCTTAAAGCGGCTCTTTTCAGTGGTGTGACTTTTAGATTGTGTCTCAGTGGTT  
GAGGAAGCTAACAGTCTTAGATCTACTTTTAAACGGATGGCCTTCTTAAGAATAAAGCAAAGGTGATTTTCTA  
CATAATTTTTGCTTTCCAAAAGTGATGATGCTCTCCTACAGCAACATATGAGAAGAAAAAGGCTTATCTAGA  
TTCGAAAATTAACGCAATTATAGTAATATATCCCCCTCTTAAATAGTAAAAAGCTCTGATTGTACAAGAATT  
ACCTGTGCTAGTCAAGTTGTTGTTTTCTTGAACAACTTTGGAAAAATGGATTTGACAGTACATAATCAGTTCT  
ACTAACCAAAGCTTGATTTTGGAAATTTACTTTTTGTACAAATGAATTATATAATGCTTAAATACTTTGTCAC  
TTTATAAGCAAATGCATAGTACTTAATTTGTTTATACTGTAAAGTATATGTTAAATGCTTTTATCACTTTGAGA  
ATAAAAAGTTACTAATGC

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**FIGURE 3926**

ACTGGCTGCTCTGAAAAGCCATCTTTGCATTGTTCTCTTGCTCGCCGCAGCCGCCTCCGCCGCGCGCCTCCTC  
CGCCGCCGCGGACTGCGGCAGCTTTATCGCCAGAGTCCCTGAACTCTCGCTTTCTTTTAAATCCCCTGCATCGGA  
TCACCGGCGTGCCCCACCATGTGACAGCGAGCCGTAGACGCCAGCTCCGAAATCACCATCAAGGACTTAAAGGAG  
AAGAAGGAAGTTGTGGAAGAGGCAGAAAATGGAAGAGACGCCCCTGCTAACGGGAATGCTAATGAGGAAAATGGG  
GAGCAGGAAGCTGACAGTGAAGTAGATGAAGAAGAGGAAGAAGGTGGGGAGGAAGAGGAGGAGGAAGAAGAAGGT  
GATGGTGAGGAAGAGGATGGAGATGAAGATGAGGAAGCTGAGTCACCTACGGGCAAGCGGGCAGCTGAAGATGAT  
GATACGCGCTCTCCACCACCCAACCCAAACCATGAGAATTTGCAACAGGGGAGGAAAAAAGAACCAAACTTCCA  
AGGCCATGCTTTTTTTCTTAAAGTACTTTAAAAAGGAAATTTGTTTGTATTTTTTATTACATTTTATATTTT  
ATACATATTGTTAGGGTCAGCCATTTTAAATGATCTCGGATGACCAAACAGCCTTGGGAGCGTTCTGTCCTACT  
TCTGACTTTACTTGTGGTGTGACCATGTTTATTATAAT

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**FIGURE 3927**

MSDAAVDTSSSEITTKDLQEKKEVVEEAENGRDAPANGNANEENGEQEADNEVDEEEEEGGEEEEEEEGDGEEEDG  
DEDEEAETATGKRAAEDDEDTRSPPPNPNHENLQQGRKKEPKLPRPCFFS



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**FIGURE 3928**

ACTGGCTGCTCTGAAAAGCCATCTTTGCATTGTTCCCTCCTTGCTCGCCGCAGCCGCCTCCGCCGCGCGCCTCCTC  
CGCCGCGCGGACTGCGGCAGCTTTATCGCCAGAGTCCCTGAACTCTCGCTTCTTTTTTAATCCCCTGCATCGGA  
TCACCGGCGTGCCCCACCATGTCAGACGCAGCCGTAGACGCCAGCTCCGAAATCACCATCAAGGACTTAAAGGAG  
AAGAAGGAAGTTGTGGAAGAGGCAGAAAATGGAAGAGACGCCCCCTGCTAACGGGAATGCTAATGAGGAAAATGGG  
GAGCAGGAAGCTGACAGTGAAGTAGATGAAGAAGAGGAAGAAGGTGGGGAGGAAGAGGAGGAGGAAGAAGAAGGT  
GATGGTGAGGAAGAGGATGGAGATGAAGATGAGGAAGCTGAGTCACCTACGGGCAAGCGGGCAGCTGAAGATGAT  
GAGGATGACGATGTCGATACCAAGAAGCAGAAGACCGACGAGGATGACTAGACAGCAAAAAAGGAAAAGTTAAAC  
TAAAAAAAAGGCCGCCGTGACCTATTACCCCTCCACTTCCCGTCTCAGAATCTAAACGTGGTCACCTTCAAGTA  
GAGAGGCCCGCCTGCCACCGTGGGCAGTGCCACCCACAGATGATACGCGCTCTCCACCACCCAACCCAAACCAT  
GAGAATTTGCAACAGGGGAGGAAAAAAGAACCAAAACTTCCAAGGCCATGCTTTTTTCTTAAAAGTACTTTAAA  
AAGGAAATTTGTTTGTATTTTTTATTACATTTTATATTTTATACATATTGTTAGGGTCAGCCATTTTAAATGA  
TCTCGGATGACCAAACCGCCTTGGGAGCGTTCTGTCCTACTTCTGACTTTACTTGTGGTGTGACCATGTTTCATT  
ATAATCTCAAAGGAGAAAAAACCTTGTAAGGAGCAAAATGACAACAGAAAAACAATCTTATTCTGAGCATT  
CCAGTAACTTTTTTGTGTATGTACTTAGCTGTACTATAAGGAGTTGGTTTGTATGAGATGGTTAAAAAGGCCAAA  
GATAAAAGGTTTATTTTTTTCTTTTTTGTCTATGAAGTTGCTGTTTATTTTTTTTGGCCTGTTTGATGTATGT  
GTGAAACAATGTTGTCCAACAATAAACAGGAATTTTATTTTGCTGAGTTGTTCT

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**FIGURE 3929**

MSDAAVDASSEITIKDLKEKKEVVEEAENGRDAPANGNANEENGEQEADSEVDEEEEGGEEEEEEEGDGEEED  
GDEDEEAESPTGKRAAEDDEDDVDTKKQKTDEDD

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**FIGURE 3930**

ATGGCGGCGGCGCGGCGGAGCAGCAACAGTTCTACCTGCTCCTGGGAAACCTGCTCAGCCCCGACAATGTGGTC  
CGGAAACAGGCAGAGGAAACCTATGAGAATATCCCAGGCCAGTCAAAGATCACATTCCCTTTACAAGCCATCAGA  
AATACAACAGCTGCTGAAGAGGCTAGACAAATGGCCGCCGTTCTCCTAAGACGTCTCTTGCTCTGCATTTGAT  
GAAGTCTATCCAGCACTTCCCTCTGATGTTGAGACTGCCATCAAGAGTGAGCTACTCATGATTATTGAGATGGAA  
ACACAATCTAGCATGAGGAAAAAAGTTGTGATATTGCGGCAGAACTGGCCAGGAATTTAATAGATGAGGATGGC  
AATAACCAAGTGGCCCGAAGGTTTGAAGTTCCTTTTTGATTTCAGTCAGCTCTCAAAATGTGGGACTGCGGGAAGCT  
GCCCTTCACATTTTCTGGAACTTTCTGGAATTTTGGGAACCAGCAACAACACTATTTAGATGTCATCAAACGA  
ATGTTAGTTTCAGTGATGCAAGATCAGGAACACCCGTCGATCAGGACGTTATCTGCTAGAGCTACAGCTGCATT  
ATACTTGCAAATGAGCATAATGTTGCTCTGTTCAAACATTTTGAGACTTGCTACCGGGATTCTTACAGGCGGTA  
AATGACTCGTGCTACCAGAATGATGATTCTGTCTTAAATCCCTCGTTGAGATTGCAGATACTGTTCCAAAGTAT  
TTGCGTCTCACTTGAAGCAACTCTACAGCTAAGTCTAAAGTTGTGTGGAGACACTAGCCTCAACAATATGCAA  
CGCCAGCTTGCCCTTGAAGTGATCGTCAACCTCTCTGAGACTGCAGCTGCTATGTTAAGAAAAATACCAATATT  
GTTGCACAGACTATTCTCAGATGTTAGCAATGATGGTTGATTTGGAAGAAGATGAGGACTGGGCAAATGCAGAT  
GAACTAGAAGATGATGATTTTGACAGCAATGCAGTTGCAGGCGAGAGTGCTCTAGATCGAATGGCTTGCGGACTT  
GGTGAAAGCTCGTTCTGCCGATGATCAAGGAACACATTATGCAAATGCTTCAAAATCCTGACTGGAAATACCGG  
CATGCAGGATTGATGGCCTTATCTGCCATTGGTGAAGGGTGCCACCAGCAAAATGGAAGGAATTCTAAATGAGATC  
GTAAATTTTGTITACTTTTTCTCCAGGATCCTCATCCAAGAGTAAGGTATGCAGCCTGTAATGCCGTGGGACAG  
ATGGCTACAGATTTTGACCTGGTTTCCAAAAGAAATTTTCATGAGAAGGTGATTGCAGCTCTGCTGCAGACCATG  
GAAGACCAAGGCAATCAACGTGTGCAGGCCCATGCAGCTGCTGCCCTCATTAACTTTACTGAAGACTGTCCCAAG  
TCACTACTTATTCCATACTTGGATAATTTGGTGAAACATCTGCATTCCATTATGGTACTGAAGCTTCAAGAGCTG  
ATTGAGAAAGGCACCAAGTTAGTTTTGGAAACAAGTTGTGACATCCATTGCATCAGTTGCCGATACTGCAGAAGAA  
AAATTTGTCCCTACTATGATTTATTTATGCCATCACTGAAGCACATCGTTGAGAATGCGGTTCAAAAAGAACTG  
AGACTTCTGAGAGGAAAACTATTGAATGCATTAGCCTCATTGGTCTGGCTGTTGGGAAGGAAAAATTCATGCAG  
GATGCATCAGATGTGATGCAGCTTTTGTAAAGACCCAGACAGACTTCAATGATATGGAAGATGATGATCCTCAG  
ATCTCTTACATGATCTCAGCATGGGCCAGAATGTGCAAAATCCTTGGAAGAAGATTTTCAGCAATACCTTCCAGTG  
GTTATGGGGCCTTTAATGAAGACGGCTTCAATTAAGCCCGAAGTAGCCCTTTTAGATACCCAAGACATGGAGAAT  
ATGAGTGATGATGATGGTTGGGAATTTGTGAACCTTGGAGATCAGCAAAGCTTTGGTATTAAACTGCAGGACTA  
GAAGAAAAATCAACTGCTTGCCAGATGTTGGTTTGCTATGCTAAGGAGTTAAAGGAAGGCTTTGTGGAGTACACC  
GAACAGGTTGTCAAACCTGATGGTCCCTTTACTGAAATTTTATTTCCACGATGGTGTTCGAGTGGCAGCAGCGGAA  
TCCATGCCTCTTCTCCTGGAGTGTGCAAGAGTCCGTGGTCTGAGTATCTCACACAGATGTGGCATTATATGTGT  
GATGCTCTAATTAAGGCCATTGGTACAGAACAGATTGAGACGTCTCTCAGAAATAATGCATTCTTTTGCAAAG  
TGCATTGAAGTAATGGGAGATGGATGCCCTTAATAATGAACACTTTGAAGAACTGGGAGGTATATTGAAAGCAAAG  
CTTGAAAGAACATTTTAAAAATCAAGAATTACGACAAGTTAAAGACAAGATGAAGACTATGATGAACAGGTGAA  
GAGTCACTACAAGATGAGGATGATAATGATGTTTATATTCTGACCAAAGTGTGAGATATTTTACACTCAATATTC  
AGTAGCTACAAAGAAAAGGTGTTACCATGGTTGAACAGCTGCTTCCATTAAATGTCAACCTCATTGTCCACAT  
AGACCATGGCCAGACAGACAATGGGGATTATGCATCTTTGATGATGTCATAGAACTGTAGTCCAGCCTCATT  
AAATACGCAGAATATTTCTTAAGACCAATGCTCCAATATGATGTGACAACAGCCCAGAAGTCAGGCAAGCAGCT  
GCATATGGCCTGGGAGTCATGGCACAGTACGGTGGAGATAATTATCGCCCTTTTGTACAGAAGCACTTCCCCTG  
CTGGTAAGAGTTATTGAGTCTGCGGATTCTAAGACCAAAGAAAATGTCAATGCTACAGAGAAGTCATCTCAGCA  
GTAGGGAAAATCATGAAGTTCAAGCCTGACTGTGTAAACGTTGAAGAGGTCTTCCACACTGGTTGTCTTGGCTT  
CCACTACATGAAGATAAAGAAGAAGCTGTTGAGACTTTCAATTATCTGTGTGACCTGATTGAAAGTAATCATCCA  
ATTGTTCTTGGCCCAACAATACCAATCTGCCAAAATATTTAGTATAATTGCGGAAGGAGAAATGCACGAGGCA  
ATTAAACATGAAGATCCTTGTGCCAAACGCTGGCCAATGTCGTTGCGCAAGTACAGACTTCTGGAGGACTGTGG  
ACTGAGTGATAGCACAGCTCAGTCTGAGCAGCAGGCCGCCATTGAGGAGCTCCTGAACTCTGCGTGA

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**FIGURE 3931**

ATGTTTACCAGCACCGGCTCCAGTGGGCTCTGTGAGTACCGGCCTCCGCCATCCTGGCTGCCCCCTACACGCCAC  
CCTAGGCACCTCTTTGAGGAGGCTGGGGCAGCGGGGACCCTCGGGTTTGCCGGAGGTGGTGGGGCCGACCCTCCA  
GACCCGCGTCCGAACCTTGCTAGTTCCCGGTCTTGGGGGTGAGCGGAAACCGCCCCCATTTGCGCCTGGAGGGGC  
GAATGGGGACAAAGCCCCGCCGCCCGCCCCGACCCACCTGGTATCCCCAGGTGCTCTGCCCAGGAGTCTCTTGG  
GGCCGCTGCAAGTGGGCAGGTGCCCTGGTGTCTCGTGGGGCCGGCCCCAGGCCCTTTGCGGAGCGTGTGCCGCGC  
TGAAGGAAGGGGCCGTCCCCCTTACCATGCCCCATTCTTTTAGGCTTGGGGGACCGAACTAACTCCCCCGCCCC  
CACTTGCAAAGTTCAGCCTCCGCTTTAGAAGCTGACCTCTCAGTTTCACTTGGATGTGTTTCTTCTTCAGTCTCC  
AAGAAGAGTTTTTAGACAAACACACACTGATGAGAGTGCTTTCAAGTGGAGGGAAGTTAGGAAGTCGTGGCGAGG  
GAGCGCAGCTGTGCTGCTGGATGTTGCTGTTTTCTGGCGTGTTAGCGGTGGTCAGCAGACAAGGCGCCTCTGTG  
GAAGAGCCTTCTGCTGGTCCCCAGTGCCCTCTCCCTCCTGCTCGCCCTCCTCCTGCCCTCACTGCCAGAAGCTCTT  
TGTGTATGACCTTCACGCAGTCAAGAACGACTTCCAGCCTGGCACCTGTGTTTGCTCTGTTTGTACCATTTTACT  
GCTCCATACCAAGAGTCCAAGTGGCACAATTTCTGGGTCCGTTGTCCATCACAAACAAGACATTGATTTATATAT  
TGGGACTGCAGCTTTTACCTCTGGTTTCTACATCTGGATTGTAGCCATAAGTGGACTTATGTCCGGTCTGTGCT  
ACGACAGCAAAATGTTCCAGGTGCATCAGGTGCTCTGCATCCCCAGCTGGATGGCAAAATTTCTTTCTTGGACAC  
TTGAACCCATCTTCTCTTCTCAGAACCCACCAGCGAAGCCAGAATTGGGATGGGAGCCACGCTGGACATCCAGA  
GACAGCAGAGAATGGAGCTGCTGGACCGGCAGCTGATGTTCTCTCAGTTTGCACAAGGGAGGCGACAGAGACAGC  
AGCAGGGAGGAATGATCAATTGGAATCGTCTTTTTCTCCTTTACGTCAGCGACAAAACGTAACTATCAGGGCG  
GTCGGCAGTCTGAGCCAGCAGCGCCCCCTCTAGAAGTTTCTGAGGAACAGGTGCGCCGGCTCATGGAGATGGGAT  
TTTCCAGAGGTGATGCTTTTGAAGCCCTGAGAGCTTCAAACAATGACCTCAATGTGCCACCAACTTCTGTCTGC  
AGCACTGATAGTCCCAGGCCAACACTGGGACCGGACCGGCAGCCGAGTGACAGTGCGTGGTCCCCACCATCAGAT  
CAGCCCCGGGACCGAGCATCTCTGGTGCTGATGTTCTTGTGGGAAGAGGGAGGTTCCACCGCACCCCTGCCCTCA  
ACCGCAAGACTGTTGCCGTTTTAGTGTGGAGATAAGTTTGCCATTACATTAGCATGTATTTCTATCTATATTTT  
TTATTGGGCATTTTCCCTAGGTTGGAGAGTCAGCACTCGTTTTGAATGTGTTTAAATGCATTAAATGGAAGAT  
TTCTGCAGGCAGTTGAATGGCACTCCAGATGGGAATTGCTGTAACCCCTTACTGTAACATGTATCTCTCTGCG  
TCGTGATGGGGAGAGGGTAATGTTACTTCACAAAGGACATGTCAGATCCTTCTTCATGGACTTTTTTAGTTACTG  
TTTTTCTCTCAAACCTGTTTTCGAATCTCCTGGGAGTGAGGGAGAAACAGGGAGCTGAATCCTCCCCCAAGCTG  
TTCCAGGCCAGAGGACTCTGCAGTACCTTCTCCTACATCTAGTAACAAAGAATGGTGATAACCATGCACCTGGTTC  
AAGGTTCTGGAGTTCTCCATGAACTTGGGTAAATTTTGCTCAGAGTATCCAGAGTTAGCCACTAGGCTGCGGGT  
GAAATGGGATGGAGAAGAACAACAGCAGGCTTCTTGAGCCACATGGGCTGACTAGGGCACTCTGTGGCTGGCCT  
GGCATGGGCTCAGCCCAGGAAGAGGAGAAACGATCCCTTGCCCTGCCCTCCCTGTGGCAGGGCTAACTGCCTGGC  
CCTCCTGGCTCGCAGCCAGCCAGCCCCCTGGCAGCAGGTCTCCTCAGGGCTTGGGTCTTCAACCTGTGGCGACA  
GGAGGCAGGGCAGACTGTGGAGGACAGGATGCAGGTCAGGGAGAGGGAAGGCAGGGGTGGACCCATGAGCATG  
AAAAGACCCGAAGCAAGTTGACTCTTGAATGTGCAACTGTTATGTTCTGCAAAATGAGCAACGATGTATCAAAT  
TGATGCAAATTTAGATGTTGATACTTACAATAAAGTTTTTAATGTGTTTTACTCTTC

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**FIGURE 3932**

TCTCCGGTCCGTGCCTCCAAGATGACAAAGAAAAGAAGGAACAATGGTCGTGCCAAAAGGGCCGCGGCCACGTG  
CAGCCTATTCGCTGCACTAACTGTGCCCAGATGCGTGCCCAAGGACAACGCCATTAAGAAATTCGTCATTCGAAAC  
ATAGTGGAGGCCGCAGCAGTCAGGGACATTTCTGAAGCGAGCGTCTTCGATGCCTATGTGCTTCCCAAGCTGTAT  
GTGAAGCTACATTACTGTGTGAGTTGTGCAATTCACAGCAAAGTAGTCAGGAATCGATCTCGTGAAGCCCGCAAG  
GACCGAACACCCCCACCTCGATTITAGACCTGCGGGTGCTGCCCCACGTCCCCACCAAAGCCCATGTAAGGAGCT  
GAGTTCCTTAAAGACTGAAGACAGGCTATTCTCTGGAGAAAAATAAAATGGAAATTGTACTT

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**FIGURE 3933**

AGGTTACCAATGAAGATCATAGCAATGTCGCCTGCTGGCTTCTGGCAAAGCAGAAGAAACCGATACGATCTCCTGG  
TGACGTCGCTTGCCGTGTATGGGTGGTGCTTCACCTTGCCCTCCTGAATGCATATACTTACATGATGGGCGCTT  
GTGTGATTGTATTTAGGTTTTCTCCATCTGTGGAACATGTAACGCTAAAGATGCTCCTCTTGACAGTGGTCCG  
TCAGCATGTACAAGAGCTTCTTTATCATAGTAGGCATGTTTCTTGTGCTGTGTACGCTTTTGCTGGAGTTG  
TTTTATTTGGTACTGTGAAATATGGGGAGAATATTAACAGGCATGCAAATTTTCTTCGGCTGGAAAAGCTATTA  
CCGTACTGTTCCGAATTGTACAGGTGAAGACTGGAACAAGATTATGCATGACTGTATGGTTCAGCCTCCGTTTT  
GTACTCCAGATGAATTTACATACTGGGCAACAGACTGTGAAAATTATGCTGGGGCACTTATGTATTTCTGTTTCAT  
TTTATGTCAITCAITGCCITACATCATGCTAAATCTGCTTGTAGCCATAATTGTGGAGAATTTCTCCTTGTTTTATT  
CCACTGAGGAGGACCAGCTTTTAAGTTACAATGATCTTCGCCACTTTCAAATAATATGGAACATGGTGGATGATA  
AAAGAGAGGGGGTGATCCCCACGTTCCGCGTCAAGTTCTTGCTGCGGCTACTGCGTGGGAGGCTGGAGGTGGACC  
TGGACAAGGACAAGCTCCTGTTTAAGCACATGTGCTACGAAATGGAGAGGCTCCACAATGGCGGCGACGTCACCT  
TCCATGATGTCTTGAGCATGCTTTATACCGGTCCGTGGACATCCGGAAGAGCTTGACGCTGGAGGAACCTCCTGG  
CGAGGGAGCAGCTGGAGTACACCATAGAGGAGGAGGTGGCCAAGCAGACCATCCGCATGTGGCTCAAGAAGTGCC  
TGAAGCGCATCAGAGCTAAACAGCAGCAGTCGTGCAGTATCATCCACAGCCTGAGAGAGAGTCAGCAGCAAGAGC  
TGAGCCGGTTTTCTGAACCCGCCAGCATCGAGACCACCCAGCCAGTGAGGACACGAATGCCAACAGTCAGGACA  
ACAGCATGCAACCTGAGACAAGCAGCCAGCAGCAGCTCCTGAGCCCCACGCTGTGCGATCGAGGAGGAAGTCGGC  
AAGATGCAGCCGACGCGAGGGAAACCCAGAGGAAATTTGGGCAGTGGCGTCTGCCCTCAGCCCCAAAACCAATAA  
GCCATTCAAGTGTCTCAGTCAACTTACGGTTTGGAGGAAGGACAACCATGAAATCTGTCTGTGCAAAATGAACC  
CCATGACTGACGCGGCTTCTGCGGTTCTGAAGTTAAGAAGTGGTGGACCCGGCAGCTGACTGTGGAGAGCGACG  
AAAGTGGGGATGACCTTCTGGATATTTAGGTGGATGTCAATGTAGATGAATTTCTAGTGGTGGAAACCGTTTTCT  
AATAATGTCCTTGATTGTCCAGTGAGCAATCTGTAATTGATCTATAACTGAATTCAGCTTGTCAACAAGATGTTT  
ATAAATTGATTTTCATCCTGCCACAGAAAGGCATAAGCTGCATGTATGATGGGTACTATCAATCATTGCTCAAA  
AAAAATTTGTATAATGACAGTACTGATAATATTAGAAATGATACCGCAAGCAAATGTATATCACTTAAAAATGT  
CATATATTCTGTCTGCGTAAACTAAGGTATATATTATATGTGCTCTAATGCAGTATTATCACCGCCCGCAAAA  
GAGTGCTAAGCCCAAAGTGGCTGATATTTAGGGTACAGGGGTATAGCTTTAGTTACATCTTTCCCATTTCCAC  
TAGAAATATTTCTCTTGAGAGAATTTATTATTTATGATTGATCTGAAAAGGTCAGCACTGAACCTATGCTAAAAAT  
GATAGTAGTTTTACAACTACAGATTCTGAATTTAAAAAGTATCTTCTTTTCTCGTGTTATATTTTAAATAT  
ACACAAGACATTTGGTGACCAGAACAAGTTGATTTCTGTCTCAGTTATGTTAATGAACTGTTGCCTCCTTCTA  
AGAAAATTGTGTGTGCAAGCACCAGGCAAGAAATGGACTCAGGATGCTTAGCGGTTTAAACAAACCTGTAGAT  
AAATCACTTGAGTGACATAGTTGCGCAAGATGTTAAGTTTCTTAAGAAACCTTTAATAACTGAGTTTAGCAAA  
AAGAATAAACTATATAGCTCAATTTATTTAAAAAATCTTGCATGTGTGATGTTATCATTGGCTTCATTTCTT  
ACCCAAGGTATGTCTGTTTTGCCATAAATCAGCAGAGTCATTTCACTTCTGGGTGATCCTAACACACCATTTGCTAC  
GTTAGATTTGAAATGACATCTCTGTTAAAGAAATCTTATGGAATAATGGTGGCCTGCAAAATCTTCCTTTGA  
ACTCACAGGTTAGGGATCACACAACCTACTTAATCGTTTTTGTTTTTTTTTCTTATATGTCAATGGCC  
CATGTCTCCTCGGGAAAAATTAGAAAAGCAAAATGATTACAAAGTGCTGTTAGATTCTTGTGCTGGGCCAGCCAAG  
TAGAAGTGGACTTGACTTGGACCTTTAACTATTTATTACAGATTGGACATTTGCTGTTTCAAGATGTTTTTAACA  
GAGGGATTATCTCAGAACTCTGTGACCTCCAGGTTGTTTTATAATCTATTTTCTCTATTTAACAATTCCTCAGAT  
AGATAGGCAAAATAGGACATTCCTTCTGTGTCACAGAAGTATCGTGGTAGTGGCAGTCTACAGTTTATATGATTCA  
TTGTAACATATGAGATAAAGAACAACCAAGTCATGTGGCCAAAAGGATTAGATTGATTGATGTTCACTTGGAGTT  
TACTTTTTGTACATACAAGATAAAATAAATATTGGATTTGT

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**FIGURE 3934**

MKIIAMSPAGFWQSRNRDYLVTSLGVVWVVLHFAALLNAYTYMMGACVIVFRFFSICGKHVTLKMLLLTVVSM  
YKSFFIIVGMFLLLLCYAFAGVVLFGTVKYGENINRHANFSSAGKAITVLFRIVTGEDWNKIMHDCMVQPPFCTP  
DEFTYWATDCGNYAGALMYFCSFYVIIAYIMLNLLVAIIVENFSLFYSTEEDQLLSYNDLRHFQIIWNMVDDKRE  
GVIPTFRVKFLLRLLRGRLEVLDLKDCLLFKHMCEMERLHNGGDVTFHDVLSMLSYSVDIRKSLQLEELLARE  
QLEYTIEEEVAKQITRMWLKKCLKRIRAKQQQSCSIHSLRESQQQELSRFLNPPSIETTQPS EDTNANSQDNSM  
QPETSSQQQLLSPTLSDRGGSRQDAADAGKPQRKFGQWRLPSAPKPIHSVSSVNLRFGGRTTMKSVCKMNPMT  
DAASCGSEVKKWWTRQLTVESESGDDLDDI

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## FIGURE 3935

CTTGGCTGGAACCTGAGACGGATTTCGCTCCCAAATGATGCTCCAGTGGCTGGAGCAACTCAAGTTCATCATTGTC  
CTGAGAGAGAGGAGCAGCGCGGTTCTCGGCCGGGACAGCAGAACGCCAGGGGACCCTCACCTGGGCGCGCCGGGG  
CACGGGCTTTGATTGTCTCGGGTTCGCGGAGACCCGCGCGCTGCCCTGCACGCCGGGCGGCAACCTTTGCAGTC  
GCGTTGGCTGCTGCGATCGGCCGGCGGGTCCCTGCCGAAGGCTCGGCTGCTTCTGTCCACCTCTTACACTTCTTC  
ATTTATCGGTGGATCATTTCGAGAGTCCGTCTTGTAATGTTTGGCACTTTGCTACTTTATTGCTTCTTTCTGGC  
GACAGTTCCAGCACTCGCCGAGACCGCGGAGAAAGGCAGCTGAGCCCGGAGAAGAGCGAAATATGGGACCCGG  
GCTAAAAGCAGACGTCGTCTTCCCGCCCGCTATTTCTATATTCAGGCAGTGGATACATCAGGGAATAAATTAC  
ATCTTCTCCAGGCGAAAAGGTCTTCCAGGTGAAAGTCTCAGCACCAGAGGAGCAATTCACTAGAGTTGGAGTCCA  
GGTTTTAGACCGAAAAGATGGGTCCCTTCATAGTAAGATACAGAATGTATGCAAGCTACAAAAATCTGAAGGTGGA  
AGTTAAATTCCAAGGCAACATGTGGCCAAATCCCATATATTTTAAAGGGCCGGTTTACCATGAGAACTGTGA  
CTGTCTCTGCAAGATAGTGCAGCCTGGCTACGGGAGATGAACTGCCCTGAAACCATTGCTCAGATTCAGAGAGA  
TCTGGCACATTTCCCTGCTGTGGATCCAGAAAAGATTGCAGTAGAAATCCAAAAAGATTGGACAGAGGCAGAG  
CCTATGTCACCTACCTTAAAGGATAACAAGGTTTATATCAAGACTCATGGTGAACATGTAGGTTTTAGAATTTT  
CATGGATGCCATACTACTTTCTTTGACTAGAAAGGTGAAGATGCCAGATGTGGAGCTCTTTGTAAATTTGGGAGA  
CTGGCCTTTGGAAAAAAGAAATCCAATTCAAACATCCATCCGATCTTTTCTGGTGTGGCTCCACAGATTCCAA  
GGATATCGTGATGCCTACGTACGATTGACTGATTCTGTCTGGAAACCATGGGCCGGGTAAGTCTGGATATGAT  
GTCCGTGCAAGCTAACACGGGTCCCTCCCTGGGAAAGCAAAAATTCACCTGCCGTCTGGAGAGGGCGAGACAGCCG  
CAAAGAGAGACTCGAGCTGGTTAAACTCAGTAGAAAACACCCAGAACTCATAGACGCTGCTTTCACCAACTTTT  
CTTCTTTAAACACGATGAAAACCTGTATGGTCCCATTGTGAAACATATTTTCATTTTTTGATTTCTTCAAGCATAA  
GTATCAAATAAATATCGATGGCAGTGTAGCAGCTTATCGCTGCCATATTTGCTAGTTGGTGACAGTGTGTGCT  
GAAGCAGGATTCCATCTACTATGAACATTTTACAATGAGCTGCAGCCCTGGAAACACTACATTCCAGTTAAGAG  
CAACCTGAGCGATCTGCTAGAAAACTTAAATGGGCGAAAGATCACGATGAAGAGGCCAAAAAGATAGCAAAAGC  
AGGACAAGAATTTGCAAGAAATAATCTCATGGGCGATGACATATTCTGTTATTATTTCAAACCTTTCCAGGAATA  
TGCCAATTTACAAGTGAGTGAGCCCCAAATCCGAGAGGGCATGAAAAGGGTAGAACCACAGACTGAGGACGACCT  
CTTCCCTTGTAATTGCCATAGGAAAAAGACCAAGATGAACTCTGATATGCAAAATAACTTCTATAGAATAATG  
GTGCTCTGAAGACTCTTCTTAACTAAAAAGAAGATTTTTTAAAGTATTAATTCCATGGACAATATAAAATCTGT  
GTGATTGTTTGCAGTATGAAGACACATTTCTACTTATGCAGTATTCTCATGACTGTACTTTAAAGTACATTTTA  
GAATTTTATAATAAAACCACCTTTATTTTAAAGGAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 3936**

MFGTLLLYCFFLATVPALAE TGGERQLSPEKSEIWGPGLKADVVL PARYFYIQAVDTSGNKFTSSPGEKVFQVKV  
SAPEEQFTRVG VQVLDRKDGSFIVRYRMYASYKNLKVEVKFQGHVAKSPYILKGPVYHENCDCPLQDSA AWLRE  
MNCPETIAQIQRD LAHFPAVDPEKIAVEIPKRFGQRQSLCHYTLKDNKVYIKTHGEHVGFRI FMDAILLSLTRKV  
KMPDVELFVNLGDWPLEKKKSNSNIHPIFSWCGSTDSKDIVMPTYDLTDSVLETMGRVSLDMMSVQANTGPPWES  
KNSTAVWRGRDSR KERLELVKLSRKHP ELIDAAFTNFFFFKH DENLYGP IVKHISFFDFFKH KYQINIDGTVAAY  
RLPYLLVGDSVVLKQDSIYYEHFYNELQPWKHYIPVKS NLSDLLEKLKWAKDHDEEAKKIAKAGQEFARN NLMGD  
DIFCYF KLFQ EYANLQVSEPQIREGMKRVEPQTEDDLFPCTCHRKKTDEL

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**FIGURE 3937A**

GAGTGTGGCTGCAGTGCGCCGGGACACCAGGGCTCCGCGCTCCGCACTCAAGAGGCTCCCGCGTCCCAACCCCTC  
GCGCCCGCGCGTTTCGCGGATCCAGGCCGAGGACCGAAAGGGGCCGCCCCGAGCCCCCGGGGCCGCGCCAGAGAG  
CCCAGCAAGGCCGCGCCGCCCTGCCGGTGTGCCGCCGGCGGGTGCTTCTGGAAGGGCCAATGCGTTCGGGCAGCAG  
CCCCGAAGCCGAGCCCGAGGCTAAGTGGGACTGACCGGGGCCAGAGTGGACGAACCGCCAGCATGGGGAGAGA  
CCAGCGCGCGGTGGCCGCCCTGCCCTACGGCGGTGGTGCTGCTGGGGACAGTGACCGTGGGGTTCTCGCCCA  
GAGCGTCTTGGCGGGTGTGAAGAAGTTTGATGTGCCGTGTGGAGGAAGAGATTGCAGTGGGGGCTGCCAGTGCTA  
CCCTGAGAAAGGTGGACGTGGTCAGCCTGGGCCAGTGGGCCCCAGGGGTACAATGGGGCCACCAGGATTACAAGG  
ATTCGCGGACTGCAGGACGTAAAGGAGACAAGGGTGAAGGGGAGCCCCCGAGTAACGGGACCCAAGGGCGA  
CGTGGGAGCAAGAGGCGTTTCTGGATTCCCTGGTGCCGATGGAATTCTGGACACCCGGGGCAAGGTGGGCCAG  
GGGAAGCCCGGGCTACGATGGCTGCAACGGAACCCAGGGAGACTCAGGTCCACAGGGGCCCCCGGCTCTGAGGG  
GTTACCGGGCCTCCCGGGCCCCAAGGACCAAAAGGGCAGAAAGGTGAGCCTTATGCACTGCCTAAAGAGGAGCG  
CGACAGATATCGGGGTGAACCTGGAGAGCCTGGATTGGTTCGGTTTCCAGGGACCTCCCGGCCGCCCTGGGCATGT  
GGGACAGATGGGTCCAGTTGGAGCTCCAGGGAGACCAGGACCCTGGACCCCTGGACCAAAAGGACAGCAAGG  
CAACAGAGGACTTGGTTTCTACGGAGTTAAGGGTGAAGGGTGAAGGTGACGTAGGGCAGCCGGGACCCAACGGGATTCC  
ATCAGACACCCCTCCACCCCATCATCGCGCCACAGGAGTCACTTCCACCCAGATCAGTACAAGGGTGAAGGAGG  
CAGTGAGGGGGAACAGGAATAAGAGGCATTTCTTGAAGGGAGAAGAAGGAATCATGGGCTTCTCTGGACTGAG  
GGGTTACCTTGGCTTGAGTGGTGAAAAGGATCACCAGGACAGAAGGGAAGCCGAGGCCTGGATGGCTATCAAGG  
GCCTGATGGACCCCGGGGACCCAAGGGAGAAGCCGGAGACCAGGGCCCCCTGGACTACCTGCCTACTCCCTCA  
CCCTTCCCTAGCAAAAGGTGCCAGAGGTGACCCGGGATTCCAGGGGCCCAAGGGGAGCCAGGAAGCCAGGGTGA  
GCCAGGAGACCCGGGCCTCCAGGTCCCCCTGGCCTCTCCATCGGAGATGGAGATCAGAGGAGAGGCCTGCCGGG  
TGAGATGGGACCCAAGGGCTTCATCGGAGACCCCGGCATCCCTGCGCTCTACGGGGGCCACCTGGACCTGATGG  
AAAGCGAGGGCCTCCAGGACCCCGGGCTCCCTGGACACCTGGACCTGATGGCTTCTGTTGGGCTGAAAGG  
AGCAAAAGGAAGAGCAGGCTTCCCTGGGCTTCCCGGCTCCCTGGAGCCCGCGGACCAAGGGGTGGAAGGTGA  
CGCTGGGGAATGCAGTGTACAGAAGGCGACGAAGCTATCAAAGGTCTTCCGGGACTGCCAGGACCCAAGGGCTT  
CGCAGGCATCAACGGGGAGCCGGGGAGGAAAGGGGACAGAGGAGACCCCGGCCAACACGGCCTCCCTGGGTTC  
AGGGCTCAAGGGAGTGCCTGGCAACATTGGTGCTCCCGGACCCAAAGGAGCAAAAGGAGATTCCAGAACAATCAC  
AACCAGGTGAGCGGGGACAGCCCGGCTCCAGGTGTGCCCGGATGAAAGGTGACGATGGCAGCCAGGCCG  
CGATGGGCTCGATGGATTCCCGGCCTCCAGGCCCTCCCGGTGATGGCATCAAGGGCCCTCCAGGGGACCCAGG  
CTATCCAGGAATACCTGGAACGAAGGGTACTCCAGGAGAAATGGGCCCCCAGGACTGGGCCTTCCCGGCCTCAA  
AGGCCAACGTGGTTTCCCTGGAGACGCCGGCTTACCTGGACCACCAGGCTTCTTGGGCCCTCCTGGCCCCGAGG  
GACCCAGGACAAATAGATTGTGACACAGATGTGAAAGGGCCGTTGGAGGTGACAGACAGGAGGCCATCCAGCC  
AGGTTGCATAGGAGGGCCCAAGGGATTGCCAGGCTGCCAGGACCCAGGCCCCACAGGTGCCAAAGGCCTCCG  
AGGAATCCAGGCTTCGACAGGAGCTGATGGAGGACCAGGGCCAGGGCTTCCAGGAGACGCAGGTCTGAAGG  
GTTCCAGGACCCCAAGGTTTCATAGGACCCGAGGATCCAAAGGTGCAGTGGGCCTCCCTGGCCAGATGGATC  
CCCAGTCCCATCGGCTGCCAGGGCCAGATGGGCCCCCTGGGGAAAGGGGCTCCCTGGAGAAGTCTTGGGAGC  
TCAGCCCGGGCCACGGGGAGATGCTGGTGTGCTGGACAGCCTGGGCTTAAAGGCCTTCCCGGAGACAGAGGCC  
CCCTGGATTACAGGAAGCCAAGGGATGCCTGGGATGCCAGGGCTGAAGGGCCAGCCAGGCCTCCAGGACCTTC  
CGGCCAGCCAGGCCTGTATGGGCTCCAGGACTGCATGGATTCCAGGAGCTCCTGGCCAAGAGGGGCCCTTGGG  
GCTGCCAGGAATCCAGGCCGTGAAGGTCTGCCTGGTGATAGAGGGGACCTGGGGACACAGGCGCTCCTGGCCC  
TGTGGGCATGAAAGGTCTCTCTGGTGACAGAGGAGATGTGGCTTACAGGGGAGCAAGGCCATCCAGGAAGCCC  
TGGATTTAAAGGAATTGATGGAATGCCTGGGACCCCGGGCTTAAAGGAGATAGAGGCTCACCTGGGATGGATGG  
TTTCAAGGCATGCCTGGACTCAAAGGGAGACCCGGGTTTCCAGGGAGCAAGGGCAGGCTGGATTTTTCGGAAT  
ACCCGCTGAAGGGTCTGGCTGGTGAGCCAGGTTTAAAGGCAGCCGAGGGGACCTGGGCCCCAGGACCACC  
TCCTGTATCCTGCCAGGAATGAAAGACATTAAAGGAGAGAAAGGAGATGAAGGGCTATGGGGCTGAAAGGATA  
CCTGGGCGCAAAAGGTATCCAAGGAATGCCAGGCATCCAGGGCTGTCAAGGAATCCCTGGGCTGCCTGGGAGGCC  
CGGCCACATCAAAGGAGTCAAGGGAGACATCGGAGTCCCGGCATCCCGGTTTGGCAGGATTCCCTGGGGTGGC  
TGGCCCCCTGGAATTACGGGATTCCCAGGATTCATAGGAAGCCGGGGTGACAAAGGTGCCCCAGGGAGAGCAGG  
CCTGTATGGCGAGATTGGCGGACTGGTGATTTCGGTGACATCGGGGACACTATAAATTTACCAGGAAGACCAGG

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**FIGURE 3937B**

CCTGAAGGGGGAGCGGGGCACCACTGGAATACCAGGTCTGAAGGGATTCTTTGGAGAGAAGGGAACAGAAGGTGA  
CATCGGCTTCCCTGGGATAACAGGCGTGACTGGAGTCCAAGGCCCTCCTGGACTTAAAGGACAAACAGGCTTTCC  
AGGGCTGACTGGGCTCCAGGGTCGCAGGGAGAGCTGGGGCGGATTGGACTGCCTGGTGGCAAAGGAGATGATGG  
CTGGCCGGGAGCTCCGGGCTTACCAGGTTTTCCGGGACTCCGTGGGATCCGCGGCTTACACGGCTTGCCAGGCAC  
CAAGGGCTTTCCAGGATCCCCAGGTTCTGACATCCACGGAGACCCAGGCTTCCCAGGCCCTCCTGGGGAAAGAGG  
TGACCCAGGAGAGGCCAACACCCCTTCCAGGCCCTGTGGGAGTCCCAGGACAGAAAGGAGACCAAGGAGCTCCAGG  
GGAACGAGGCCCACCTGGGAGCCCAGGACTTCAGGGGTTCCCTGGTATCACACCCCTTCCAACATCTCTGGGGC  
ACCTGGTGACAAAGGGGGCCAGGGATATTTGGCCGTGAAAGGTTATCGGGGCCACCAGGGCCACCAGGTTCTGTC  
TGCTCTTCTGGAAGCAAAGGTGACACAGGGAACCCAGGAGCTCCAGGAACCCAGGGACCAAGGATGGGCCGG  
GGACTCCGGGCCCCAGGGCAGGCCTGGTGTGTTGGTCTCCAGGAGAAAAAGGGCCCAGGGGTGAACAAGGCTT  
CATGGGGAACACTGGACCCACTGGGGCGGTGGGCGACAGAGGCCCAAGGGACCCAAGGGAGACCCAGGATTCCC  
TGGTGCCCCCGGACTGTGGGAGCCCCCGGATTGCAGGAATCCCCAGAAGATTGCCGTCCAACAGGGACAGT  
GGGTCCCCAGGGGAGGCGAGGCCCCCTGGGGCACCAGGGGAGATGGGGCCCCAGGGCCCCCGGAGAACCAGG  
TTTCCGTGGGGCTCCAGGGAAAGCTGGGGCCCAAGGAAGAGGTGGTGTGTCTGCTGTTCCTGGCTTCCGGGGAGA  
TGAAGGACCCATAGGCCACCAGGGGCCGATTGGCCAAGAAGGTGCACCAGGCCGTCCAGGGAGCCCGGGCCTGCC  
GGGTATGCCAGGCCGACGCTCAGCATCGGTACCTCCTGGTGAAGCACAGCCAGACGGACCAGGAGCCCATGTG  
CCCAGTGGGCATGAACAACTCTGGAGTGGATACAGCCTGCTGTACTTCGAGGGCCAGGAGAAGGCCGACAACCA  
GGACCTGGGGCTGGCGGGCTCCTGCTGGCGCGGTTACAGACCATGCCCTTCCTGTACTGCAACCTGGTGATGT  
CTGCTACTATGCCAGCCGGAACGACAAGTCTACTGGCTCTCTACCACTGCGCCGCTGCCCATGATGCCCCGTGGC  
CGAGGACGAGATCAAGCCCTACATCAGCCGCTGTTCTGTGTGTGAGGCCCCGGCCATCGCCATCGCGGTCCACAG  
TCAGGATGTCTCCATCCACACTGCCCAGCTGGGTGGCGGAGTTTGTGGATCGGATATTCCTTCCTCATGCACAC  
GGCGGGGGGAGACGAAGGCGGTGGCCAATCACTGGTGTACCCGGGCAGCTGTCTAGAGGACTTCCGCGCCACACC  
ATTATCGAATGCAATGGAGGCCGCGGCACCTGCCACTACTACGCCAACAAAGTACAGCTTCTGGCTGACCACCAT  
TCCCGAGCAGAGCTTCCAGGGCTCGCCCTCCGCGGACACGCTCAAGGCCGGCCTCATCCGCACACACATCAGCCG  
CTGCCAGGTGTGCATGAAGAACCTGTGAGCCGGCGCGTGCCAGGAAGGGCCATTTTGGTGCTTATTCTTAACCTTA  
TTACCTCAGGTGCCAACCACAAAATTGGTTTTATTTTTTCTTAAAAAAAAAAAGTCTACCAAAGGAATTGCA  
TCCAGCAGCAGCACTTAGACCTGCCAGCCACTGTACCGAGCGGGTGCAAGCACTCGGGGTCCCTGGAGGGCAAG  
CCCTGCCCCACAGAAAGCCAGGAGCAGCCCTGGCCCCCATCAGCCCTGCTAGACGCACCGCCTGAAGGCACAGCTA  
ACCACTTCGCACACACCCATGTAACCACTGCACTTTCCAATGCCACAGACAACCTACATTGTTCAACTCCCTTCT  
CGGGGTGGGACAGACGAGACAACAGCACACAGGCAGCCAGCCGTGGCCAGAGGCTCGAGGGGCTCAGGGCCTCAG  
GCACCCGTCCCCACAGAGGGCCCCGTGGGTGGGCCTGGCCCTGCTTCTACGCCAATGTTATGCCAGCTCCATG  
TTCTCCCAAATACCGTTGATGTGAATTATTTTAAAGGCAAAACCGTGCTCTTTATTTTAAAAAACACTGATAATC  
ACACTGCGGTAGGTCAATTCTTTGCCACATCCCTATAGACCACTGGGTTTGGCAAACTCAGGCAGAAGTGGAGA  
CCTTTCTAGACATCATTGTCAACCTTGCTACTTGAAGGTACACCCCATAGGGTCGGAGGTGCTGTCCCCACTGCC  
CCACGTTGTCCCTGAGATTTAACCCCTCCACTGCTGGGGGTGAGCTGTACTCTTCTGACTGCCCCCTCCTGTGTA  
ACGACTACAAAATAAACTTGGTTCTGAATATTTTT

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**FIGURE 3938**

AGTCGTAGGCGCTGGCCGCTGACATGTTGAGGACTACGCGCGGCCAGGCCTGGGCCCCCGCTGCTCCAGGCCG  
CGCTGGGCCTTGGGCGGGCTGGGTGGCACTGGCCTGCGGGCCGGGCGGCGAGCGGGGGCGCGGGCGGGCCTGGC  
TGCAGCCCACGGGCCGGGAGACGGGTGTGAGGTGTACAACAGCCTCACCGGGAGGAAGGAACCCCTAATCGTGG  
CGCACGCCGAAGCCGCCTCCTGGTATAGCTGTGGACCAACTGTATATGATCATGCGCACCTTGCCATGCTTGCT  
CATATGTTAGATTTGATATCATTGGAAGGATCCTAACCAAGGTTTTTGGATGCAGCATAGTCATGGTGATGGGTA  
TTACAGATGTAGATGATAAAATCATCAAAGAGCCAATGAGATGAATATTTCCCCCGCTTCCCTCGCCAGTCTTT  
ATGAGGAAGACTTCAAGCAGGACATGGCAGCCCTGAAGGTTCTCCACCCACGGTGACCTGAGGGTAACCGAAA  
ATATTCCTCAGATAATTTCTTTCATTGAAGGAATCATTGCTCGTGGGAACGCTTATTCAACGGCAAAAGGCAATG  
TCTACTTCGATCTGAAGTCTAGAGGAGACAAGTATGGCAAATTGGTCGGCGTGGTCCCTGGTCCAGTCGGAGAGC  
CAGCGGACTCTGACAAGCGTCATGCCAGTGACTTCGCCCTGTGGAAGGCGGCCAAACCCAGGAGGTGTTCTGGG  
CCTCTCCCTGGGGACCCGGGAGGCCGGGCTGGCACATCGAGTGCTCTGCCATCGCTAGTATGGTATTTGGAAGTC  
AACTGGATATCCATTACAGGTGGGATAGATTTAGCTTTTCCACATCATGAGAACGAAATTGCACAGTGCGAAGTCT  
TTCATCAGTGCGAGCAGTGGGAAATTATTTCTGCATTCTGGGCATTTGCACGCCAAAGGCAAAGAAGAAAAA  
TGTCCAAATCATTAAAGAACTACATTACTATTAAGGACTTTCTGAAGACCTTTTCCCCGATGICTTCCGGTTCT  
TCTGCCCTGCGGAGCAGCTACCGCTCAGCCATCGACTACAGTGACAGCGCCATGCTCCAAGCTCAGCAGCTGCTCC  
TGGGGCTGGGCTCTTTCTGGAGGACGCACGTGCCTACATGAAGGGGCAGCTGGCCTGCGGCTCCGTCAGGGAAG  
CGATGCTGTGGGAGAGGCTCTCCAGCACCAAGAGGGCCGTGAAGGCGGCCTTGGCAGATGATTTTGACACACCCA  
GGGTGGTTGATGCCATCCTGGGCCTTGACACACCGGAATGGACAGCTCAGGGCGTCCCTGAAGGAACCTGAAG  
GGCCGAGAAGTCCTGCTGTGTTTGGTGCCATCATCTCTTACTTTGAACAGTTTTTTGAAACTGTTGGAATTTCTC  
TGGCAATCAACAGTACGTTTCAGGAGACGGCAGCGAGGCTACCTTGATGGTGTGGTGGACGAGCTGGTGCGGT  
TCCGGCAGAAGGTCCGGCAGTTTGCGCTGGCCATGCCCCAGGCCACGGGGGACGCCCGGCGGCAGCAGCTCCTAG  
AAAGGCAGCCCCTGCTGGAAGCATGCGACACCCTGCGCCGGGGCCTGACTGCCCACGGCATCAACATCAAGGACA  
GAAGCAGTACAACATCCACGTGGGAATGCTGGATCAAAGGACAAAAGACCAAAATCAGCGGGCTGAGGATGGA  
GCACAGCCATGAACCTGCTCACGACAAGACGCACCCATGCTTCTCAGGGTCAAGGCTTTATGTTAAAGCTTCCTG  
TCGGGGCTGCTAGGTCAGCATTAAAGTAAGGCAACCAACAGTG

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**FIGURE 3939**

MLRTTRGPGGLGPPLLQAALGLGRAGWHWPAGRAASGGRGRAWLQPTGRETGVQVYNSLTGRKEPLIVAHAEAAASW  
YSCGPTVYDHAHLGHACSYVRFDIIRRILTKVFGCSIVMVMGITDVDDKIIKRANEMNISPASLASLYEEDFKQD  
MAALKVLPPTVYLRVTENIPQIISFIEGIIARGNAYSTAKGNVYFDLKSRGDYKGLVGVVPGPVGEPADSDKRH  
ASDFALWKAAPQEVFWASPWGPGRPGWHIECSAIASMVFGSQLDIHSGGIDLAFPHHENEIAQCEVFHQCEQWG  
NYFLHSGHLHAKGKEEKMSKSLKNYITIKDFLKTFSQDVFRFFCLRSSYRSAIDYSDSAMLQAQQLLLGLGSFLE  
DARAYMKGQLACGQSVREAMLWERLSSTKRAVKAALADDFDTPRVVDAILGLAHHGNGQLRASLKEPEGPRSPAVF  
GAIISYFEQFFETVGISLANQQYVSGDGSEATLHGVDDELVRFRQKVRQFALAMPEATGDARROQLLERQPLLEA  
CDTLRRGLTAHGINIKDRSSTTSTWELLDQRTKDQKSAG

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**FIGURE 3940**

CGGGGGCTGGCGGCTGCGGCTCGGCGGAGAGTGCAGCATGCGCTCGGAAAAGGAGGGGGCCGGAGGCCTTCGGGC  
GGCCGTTGCCGCGCGGGGCCCCGAGCGGGAGGGAGAAGCTGTGCGCCCTAGAAGTGCAGTTCCACCGCGACTCGCA  
GCAGCAGGAGGCTGAGACGCCGCCAACTTCGTCTCCGGTTGCGGGGGCGGTGCGGGCAAACCTCGCGAGGAGAA  
GAGGACGGCCCTGAGCAAGGTGGTCATCCGCCGCTTCGCTCCGGGCCTCACCAGGAGCAGCTGGAGGAGCAGCT  
GCGCCCGCTGCCAGCACAGCTACTTCGAGTTCTTCGCCGCCGACCTGAGTCTTTATCCTCATCTCTACTCAAG  
AGCATACATTAATTTTAGGAATCCTGATGACATCCTTCTTTTTTAGAGATCGTTTTGATGGATATATCTTCCTTGA  
CAGCAAAGGCCTAGAATATCCTGCAGTGGTAGAGTTTGCTCCATTCCAGAAGATAGCCAAAAAGAAGCTGAGAAA  
AAAAGATGCCAAGACTGGAAGCATCGAAGATGATCCAGAATATAAGAAGTTTTTAGAAAACCTACTGTGTGGAGGA  
AGAGAAGACCAGTGCCAACCCTGAGACTCTGCTGGGGGAGATGGAGGCGAAGACAAGAGAGCTCATTGCTAGAAG  
AACCACACCTCTTTTGAATATATTAAAAATAGAAAATTAGAAAAGCAGAGAATTCGAGAAGAGAAGCGAGAAGA  
ACGGAGGAGGAGAGAGTTAGAAAAGAAACGTTTGCGGGAAGAGGAAAAAGAAGAAGAAGAGAAGAAGATG  
CAAAAAAAGAGACAGATAAACAGAAGAAATTGCAGAGAAAGAAGTAAGGATTAAGCTTCTTAAGAAACCAGA  
AAAGGGAGAGGAACCAACCACAGAGAAACCAAAAGAAAGAGGAGAGGAGATTGATACTGGAGGTGGCAAGCAGGA  
ATCCTGTGCCCCCGGTGCAGTCGTAAAAGCCAGGCCCATGGAAGGCTCGCTGGAGGAGCCCCAGGAGACGTCACA  
CAGCGGCAGTGATAAAGAGCACAGGGATGTGGAGAGATCTCAAGAACAAGAATCTGAAGCACAAAGATACCATGT  
GGATGACGGCAGGAGGCACAGAGCTCACCACGAGCCTGAACGGCTTTCCAGAAGGAGTGAGGATGAGCAGAGATG  
GGGGAAGGACCTGGCCAAGACAGAGGGAAGAAGGGGAGCCAGGACAGCGGGGCTCCGGGGGAGGCCATGGAGAG  
ACTGGGAAGAGCGCAGAGGTGTGACGACAGTCCAGCACCCAGAAAAGAGCGACTGGCAAACAAGGACCGGCCAGC  
CTTGCACTGTATGATCCAGGAGCTCGCTTCCGAGCGCAGAGTGTGGCGGAAACAGGAGGATCTGCAAGGCAGA  
AGGTTTCGGGGACTGGTCCTGAGAAGAGGGAAGAGGCAGAGTGAGTCAGTCACTGCACGCACCTGGCCTCCATGGACGAG  
CAAGGGCATCCCAGAAACGTGTAAATGACCCCGAGTGTGACTGGGAAGGAGAACTTATTCCTTACCAGGAACTG  
GAAGCTAAAAATACAGAGGGTGACGTAGAAACACGCAGAAACCATTTCTAAAGAAAGTAGTGATCTTGATTAAAT  
TGAGCAGAATTCTCACAGATTTTACCATTCTGTTATAAACTAGTATTTGTTGTTTAGCCAAAACAGAAAATGAT  
TTCCACTGGACAGTAGAAAAATATGTGTAAATAGGGAAGAAAGTTAGTATTGGATCAGTGTGAGTCCTGAAGCA  
CTTTCAGTGCTGTGAGAACGACATCCACTTTGGGTTTCATTGTTTGTAAAGCAGAGGAGCTGTCAGTCACTCGTG  
CTTCTCGGTGGCCTCTGAGCCATGGTGTGAGTGAAGAGTAGTTCTTGTGTTTACAACCTTTGTGAGTCAGCCA  
TGCCCGCAAAGCGTGCTGTGTTTTAGTCCTGGTAGGAATATTTATCAGAGTTCACACTATATAAAACCAACAGC  
TTCAACTATTGCCCTTCAACAGTTTGGCCACTGACCGGATAGAAACGGTTTCAGTCTCTGGATGGATGTGTTTG  
TGTTTGTAAACATTACGGTTTAAACCATGGTTTAAAGAAATTGCCCAAATAACAGAAATTTGTTCGGGAAGGGA  
TAAACTAGATATAGCATACAGAGCCTGTTTTGAGTTTTAGATACTTTATTTGTAAATAACTTAAATAGCTTTC  
TGAAACCGTGATTCTGTAGTTTCTTCTTTCAGTGAAATTGCTAAATGTCAATGTATTTTGGCACTGCGATTT  
TAACCATTTATTAATAAAAAATTTTGTTAAAGAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3941**

MRSEKEGAGGLRAAVAARGPSGREKLSALEVQFHRDSQQQEAETPPTSSSGCGGGAGKPREEKRTALSKVVIRRL  
PPGLTKEQLEEQRLPLPAHDYFEFFAADLSLYPHLYSRAYINFRNPDDILLFRDRFDGYIFLDSKGLEYPAVVEF  
APFQKIAKKKLKKDAKTGSIEDDPEYKKFLETYCVVEEKT SANPETLLGEMEAKTRELIARRTTPLLEYIKNRK  
LEKQRIREEKREERRRRELEKKRLREEEKRRRREERCKKKETDKQKKIAEKEVRIKLLKKPEKGEEPTTEKPKE  
RGEEIDTGGGKQESCAPGAVVKARPMEGSLEEPQETSHSGSDKEHRDVERSQQESEAQRYHVDDGRRHRAHHEP  
ERLSRRSEDEQRWGKGPQDRGKKGSQDSGAPGEAMERLGRAQRCDDSPAPRKERLANKDRPALQLYDPGARFRA  
RECGGNRRICKAEGSGTGPEKREEAE

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**FIGURE 3942**

CGGGGGCTGGCGGCTGCGGCTCGGCGGAGAGTGCGGGCATGCGCTCGGAAAAGGAGGGGGCCGGAGGCCTTCGGGC  
GGCCGTTGCCGCGCGGGGCCCCGAGCGGGAGGGAGAAGCTGTGCGCCCTAGAAGTGCAGTTCCACCGCGACTCGCA  
GCAGCAGGAGGCTGAGACGCCGCCAACTTCGTCTCCGGTTGCGGGGGCGGTGCGGGCAAACCTCGCGAGGAGAA  
GAGGACGGCCCTGAGCAAGGTGGTCATCCGCCGCTGCCCTCCGGGCTCACCAAGGAGCAGCTGGAGGAGCAGCT  
GCGCCCGCTGCCAGCACGACTACTTCGAGTTCTTCGCCGCCGACCTGAGTCTTTATCCTCATCTCTACTCAAG  
AGCATACATTAATTTTAGGAATCCTGATGACATCCTTCTTTTAGAGATCGTTTTGATGGATATATCTTCTTGA  
CAGCAAAGATCCAGAATATAAGAAGTTTTTAGAAACCTACTGTGTGGAGGAAGAGAAGACCAGTGCCAACCTGA  
GACTCTGCTGGGGGAGATGGAGGCGAAGACAAGAGAGCTCATTGCTAGAAGAACCACACCTCTTTTGAATATAT  
TAAAAATAGAAAATTAGAAAAGCAGAGAATTCGAGAAGAGAAGCGAGAAGAACGGAGGAGGAGAGAGTTAGAAAA  
GAAACGTTTGCGGAAGAGGAAAAAAGAAGAAGAAGAAGAAGATGCAAAAAAAGAGACAGATAAACA  
GAAGAAAATTGCAGAGAAAGAAGTAAGGATTAAGCTTCTTAAGAAACCAGAAAAGGGAGAGGAACCAACCACAGA  
GAAACCAAAAGAAAGAGGAGAGGAGATTGATACTGGAGGTGGCAAGCAGGAATCCTGTGCCCCCGGTGCAGTCGT  
AAAAGCCAGGCCCATGGAAGGCTCGCTGGAGGAGCCCCAGGAGACGTCACACAGCGGCAGTGATAAAGAGCACAG  
GGATGTGGAGAGATCTCAAGAACAGAATCTGAAGCACAAAGATACCATGTGGATGACGGCAGGAGGCACAGAGC  
TCACCACGAGCCTGAACGGCTTTCCAGAAGGAGTGAGGATGAGCAGAGATGGGGGAAAGGACCTGGCCAAGACAG  
AGGGAAGAAGGGGAGCCAGGACAGCGGGGCTCCGGGGGAGGCCATGGAGAGACTGGGAAGAGCGCAGAGGTGTGA  
CGACAGTCCAGCACCCAGAAAAGAGCGACTGGCAAACAAGGACCGGCCAGCCTTGACAGCTGTATGATCCAGGAGC  
TCGCTTCCGAGCGCGAGAGTGTGGCGGAAACAGGAGGATCTGCAAGGCAGAAGGTTGCGGGACTGGTCTTGAGAA  
GAGGGAAGAGGCAGAGTGAGTCACTGCACGCACCTGGCCTCCATGGACGAGCAAGGGCATCCCAGAAACGTGTAA  
ATGACCCCCGAGTGTGACTGGGAAGGAGAAGTTATTCCTTACCAGGAACTGGAAGCTAAAAATACAGAGGGTGAC  
GTAGAAACACGCAGAAACCAATTCTAAAGAAAGTAGTGATCTGTATTAAATTGAGCAGAATTCTCACAGATTTTA  
CCATTCTGTATTATAAACTAGTATTTGTTGTTTAGCCAAACAGAAAATGATTCCACTGGACAGTAGAAAAATAT  
GTGTAAAATAGGGAAGAAAGTTAGTATTGGATCAGTGTGAGTCCTGAAGCACTTCAGTGCTGTGAGAACGACAT  
CCACTTTGGGTTTCATTGCTTTGTAAGCAGAGGAGCTGTCAGTCACTCGTGCTTCTCGGTGGCCTCTGAGCCATG  
GTGTCGAGTGAAGAGTAGTTCTTGTGTTTACAACCTTTGTGAGTCAGCCATGCCCGCAAAGCGTGCTGTGTTTT  
AGTCCTGGTAGGAATATTTATCAGAGTTCACACTATATAAAACCAACAGCTTCAACTATTGCCCTTTCAACAGT  
TTTGCCACTGACCGATAGAAACGGTTTCAGTCTCTGGATGGATGTGTTTGTGGTTTGTAAACCATACGGTTTTAA  
ACCATGGTTTTAAGAAATTTGCCCAAATAACAGAAATTTTGTTCGGGAAGGGATAAACTAGATATAGCATACAGAGC  
CTGTTTTTTAGTTTTAGATACTTTATTTGTAAATAACTTAAATAGCTTTCTGAAACCGTGCACTCTGTAGTTTC  
TTCTTTTCAGTGAAATTGCTAAATGTCAATGTATTTTTGGCACTGCGATTTTAACCATTTATTAAATAAAAAATTT  
TGTTAAAGAAAAA



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**FIGURE 3943**

MRSEKEGAGGLRAAVAARGPSGREKLSALEVQFHRDSQQQEAETPPTSSSGCGGGAGKPREEKRTALSKVVIRRL  
PPGLTKEQLEEQLRPLPAHDYFEFFAADLSLYPHLYSRAYINFRNPDDILLFRDRFDGYIFLDSKDPEYKKFLET  
YCVEEEKTSANPETLLGEMEAKTRELIARRTTPLLLEYIKNRKLEKQRIREEKREERRRRELEKKRLREEEKRRRR  
EEERCKKKETDKQKKIAEKEVRIKLLKKPEKGEEPTTEKPKERGEEDTGGGKQESCAPGAVVKARPEGSLEEP  
QETSHSGSDKEHRDVERSQQESEAQRYHVDDGRRHRAHHEPERLSRRSEDEQRWGKPGQDRGKKGSQDSGAPG  
EAMERLGRAQRCDDSPAPRKERLANKDRPALQLYDPGARFRARECGGNRRICKAEGSGTGPEKREEAE

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**FIGURE 3944**

CGGAAGTGC GGATCCCAGCGGCGGTCTGTAGCTGAGCAGGCCTGGGGCTTGGTTCTATGTCCTGTGGCTATGT  
TTCCAGTGTCTCTGGGTGTTTCCAAGAGCAACAAGAAACGAATAAATCTCTGCCCCGAGCGCCTCCACCCCAG  
AGACCCGGACCAAGTTCACACAGGACAATCTGTGCCACGCCAGCGCGAGCGCCTGGACTCGGCCAACCTGTGGG  
TGCTGGTGGACTGCATCCTTCGCGACACCTCCGAGGACCTGGGACTCCAGTGTGACGCCGTGAACCTGGCCTTCG  
GGCGCCGCTGTGAGGAACTGGAGGACGCGCGGCACAAGCTGCAGCACCACCTGCACAAGATGTGCGGGAATCA  
CAGATCAGGAACACAACCTTGGTGGCACTGAAGGAGGCCATCAAGGACAAGGAGGAACCTCTGCACATAGCCCAGA  
CCCGGCTGTAGCTGCTCTCACACCGGCCAACATGCAGCTGTGCCGCGATGCAGCCCAGTTCAGGTACTGCCTGG  
GCCTCTGAGGCAGTCCCAGGTGCCCCATCCACCTCCTCGCTGCGACCCTCTCCAATAAACACTCCAATCTCCAC  
ACACACATCCCCACAGGTGCTGAGAGGGGAGGGAGACTCTGCGGCCACACACAACATGCAAGCACGCCTTAAAC  
ACACAGATATAGACATGACACTGGGCAGGTGATGGGTGCGGGGCCTCCCCGTGCCAGGGACCTGTGCCACGTGG  
TCTACCCCCACCCTGTGCTACCTCATCTTCCCGGGAGGAAGCTCCTTCAGACAAGGTGAGCTCCTGGAGGCCACG  
GGGCCAGAGAGGCCAGAGAGGGCCATTCCCTGCTGCCCTGAGGGTGTGTCCCCACCTCTGGTGGAAAGTATGAC  
CTACGCCTGGGCTACAGGCATAGATGGGCCGTCTTTTGTTCCTTGTTAACGGATGCCTGGTGGCCCCCTTCTG  
AGCCTAAGTACCTTTCTTCCTTCCCTGCCCCCTCAGTTTCTTCAAGGAACCTGGGTGCCTCCTTCCGTCAAATATCA  
GGAATGGAAAGAACTGAGCCTGGTCGGCTGAGGCCAGTCTGTCTGTGTCAGGGTCGAGATTGCACGCGGGTCACT  
CATTCCCACTCAGGCCCCGCGCTCCCTGGGAGGACCCTCGTAATTTATGCTCTGCCCTAGAGCCGCTTTCTTGGA  
GGATCCTTTTCATGGCGTCTTCCCAGGACCTCCTGCCAGTCCCATTGGGAGTTTGGGTCCCCCTCCACCCAGTA  
GGTGCACTTCTGCCCTCCCCAGCCCCAGCTCACACCCCCAACACCCCAAGCTGGTGAGTGAGGTGGAGGAG  
CTGTACAAGTCCATCACAGCGCTGCGGGAGAAGCTTCTACAAGCGGAGCAGTCCCTGCGCAACCTCAAGGACATC  
CACATGAGCCTGGAGAAGGACGTCACTGCCATGACCAACAGTCTCTTCATCGACCGCCAGAAGTGCATGGCCCAT  
CGTACTTGCTACCCACCATTTCTGCAGCTGGCTGGCTACCAGTGAGCAGCGGCACGGTGCTTCCCCCAATCCCC  
CAAATAAACAGTGCCTTAGCTTTC

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**FIGURE 3945**

MFPVSSGCFQEQQETNKSLPRSASTPETRTKFTQDNLCHAQRERLDSANLWVLVDCILRDTSEDLGLQCDVNLA  
FGRRC EELEDARHKLQHHLHKMLREITDQEHNLVALKEAIKDKEEPLHIAQTRL

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**FIGURE 3946A**

CTGACCACACACACTCCTCACTCCCCTGGCCCTGATGGGCGGCAGACACCATGGTGACAGCGGATGTGCTCCTAC  
CAGAGCCAGCACCAGCAGACAGTGTACCCCTGCGAGCTGCCCTGCAAAGAGTATGACGTGGCCCCGAACATGGGCG  
TCTACAGCTCCTCCAGCCTGGCCACCGCCAGCTGGAGGTGTGGTTCCAGAACTGCTATGCTCGCTACCACCAGGC  
CTTCGCCGACTGCAACCAGTCCGAGCGGGAGCTGCAGGGGCGCGAGAGCCAGCAGCTGGCCGCGAGAGACCCAGGC  
GCTGGCACAGCCGACACAGCAAGACTCCACGTGCAGGGTGGGCGAGCGACTGCAAGACACGCACAGCTGGAAGTC  
AGAGCTGCAGCACGAGGTGGAGGTGCTGGCTGCAGAGACCACCTGCTGCTGGCCCAGAAGCAACGGCTGGAGCG  
TGCCCTGGATGCCATGGAGGTGCCCTTCTCCATCGCCACTGACAACATGCAGTGCAGCCAGCGCCACCAGCACGC  
CAACCTTGTGCGTGACTATGTGGAGACGGAGCTGCTGAAGGTGCCAGCAGCCTTGGGTGGCCAGGACTTGTGGGC  
ACAGAGAGGAGGAGCCCCCGGCAGTTTCATGTGGACAAGCCACGTGGCTGCTGCAAGCACACGGGAGACCAGCCCT  
CTGTGCGTGAGACACCTGAGTCCTGAAATCTGGCCCCCTTAGTGACAGGAGGCAGTTTTGCCCCAGAAGGCCCTTG  
ACTTCCAAGCAGCTGTTTTCTCTCTCTCCATAACCTTTGAGTCTTGGCACAGTCATCCTGACCTTGGGCTCCCC  
AGAGACCCCTCCCTGATTGGGACAGTTGCTCCCGAGGTGGAAACCCAGGTCTGGGCCAGCACTGCGGGTGTGGACA  
GGTAGGTTGGGATAGGCTGGGAGCCACTGCTCCCATTCATCTATACAGAGCCGGGGACACGAAGATCTGCACCC  
ACAGGTCCCTTCTCTTGTACCTGTAACCTCCCAATCCAGCCCAGCTTGTCTATGGGGCAACCCCATAGGGTG  
AGAGAGTAACTCAGTCCCTGGCACTGATGCTGGCTCTGGAGAATTCCTGAGCTCTCAGAGCCTGGGGCTCCATG  
AGAACCCTACAGGCCTGTAGACATTTGTGAAAGATGTGGGGTGGAGGCAGCTGGTCTCCTGCCATACCCCCAAA  
TTCAGGCAAGAACCCTTGAATCCCTCCCCCTTCATGCCTTCCCTCCTCCCTCCCTTCCCTTCTGCAGGCCTA  
TCCCCCTGCACCCCTCTCAGTGCCCTCAAGAACTGCTGCAGCTCCCGCAAACCCCTCTGCCTGCAACAAGGGTGCCTG  
TGAAGTGATGGAGACACTGACAGTGCAGGAAGAGGCAAACCCAGGGACAGAGGGGTGCAGGACTCGGGCCCTGGC  
ACACAAGGAGGTGTTGACAAAGGCCCTTCAGCAGCTGGGCCTCCTGGGATCCTCACCAGGACCGGATCTGGTGCT  
CAGGGCGTCTCCTCCCTCAGGAAGCTGAGCCCATCCGGAACATTCAGGAGCTGCTGAAGAGAGCCATCGTGCAAG  
CAGTGAGCCAGATCCAGTGGGTGCGAGGGCTGCCAAAGGGATGACTCCTGACCCACCCACGGCTGGTCTGGGGC  
AAGGCATTGAACGACAGAACCCTGAAGCTCAGAGCCAGCAGGGGTGTCCCAGGTACAGTGGGAGCACAGGGCT  
GGGTGGGGGAGGTTCTGGCCAGCCTGAGTTTGTGAGTGCCAAAGCCCAGGGCCACAACCTGATCTGCAGCCTCCCA  
GCATGGGCGGCAGCTCTTCGTCACTGCTGAGCACAAGGACAGCCGGCCCAAGAACTCCCTCCTGAAGCGGGCATGA  
AGGCCTAGCCTGCAGCATGGAGGGTCCCCAGTGGGGCCCTCCCTGGCCACACACCAAGGCCCTGCCCCACCTCGC  
CCCAGACTGAACCGAGAGCACACGGAGATCTGCGAGATGGACTGGTTGGACAAGGTGGAGGCCTACAACCTCGAC  
GAGACTTGCGGGCGCCACCACAGCCAGAGCACCAGGTGCAGGCTCATCCGGCACTCCACCACCTTCCAAGAGAG  
GGGGGCCCCAGCTCTGCCCCCGTGCTTGCCCTGGCTGTGGTCTCGCTCCCTCTGCTGGGGGCCCCAGCGGCGC  
TGCTTCCCCCAGCCTGGCCAGAGGCCCTCGCCCCGAGGGCACTTGGGCAACTGTCTGCCCCCTGGCATGAGAAA  
GCGTGCAAGACCTCCTCAAGTGCCAGCGCTGCACAGCCTGGTTGCCCGTAGACAGGACAGGTGGGATGCGGT  
CAGCCCCAGGCGCCGGCAGGATTGCATTTCCACCGAAGGCCAGCAGAGGGAGCACGACCACCGCCCACTTGAGCA  
TGGCAAACCTCTGGCCCCGACGCGCTCCACCCAGAGACCCGGACCAAGTTACACAGGACAATCTGTGCCACG  
CCCAGCGCGAGCGCCTGGACTCGGCCAACCTGTGGGTGCTGGTGGACTGCATCCTTCGCGACACCTCCGAGGACC  
TGGGACTCCAGTGTGACGCCGTGAACCTGGCCTTCGGGCGCCGCTGTGAGGAACTGGAGGACGCGCGGCACAAGC  
TGCAGCACCACTGCACAAGGTGGGGCACCTGAACCCCGAAGACAGCTCCGGCGCCTGCCACCACTCTGCCCC  
CTCTCATCACCTGGCCTGGGCCCTCAACACCTTTCTCCTCTGTCCCACTTATCCCGAGGGACCCAGAAAGCAAGT  
GTCACCTCTCCGTAAACCTATGTAAAACAGGTGACACTGGGTATGATCGCAGTGTGTGCAACCCCATGACTG  
AGCAGGAGGAGCTGTGGGGAGGATGGAGGCAGGAGCTGGTCTGGGGAGCATTGACTGCCTGGGAGGTCCCCAAGA  
GTCCTGGCCTGGCAGGCAGGGCTGTGACTCTAGGGCCTCAGCATGGCCTTTACCACCTCTGAGTCCCCAGTCTT  
GAGCAGGATTTGGGTCTGGTGACCACCAAGGATGGGGGTTCTTGGACCAGAGCTAAGAGACAACAGGTGCCTG  
ACTCTCCAGAGCCCCTGGGGGCCCTGTGCACATTGTTCCCTCATCCACGCCTCCCGAGGCCATGGTTCAGGA  
CCACCTCTGGACACAGCCCCAGGAGCTGGGTAGGACCAGACTGGTCTCCACATTCCATATGCCCGGCGATGGGG  
GCACAGGCCCAAGGGGCACTGTCTGTCTGCAGATGCTGCGGGAAATCACAGATCAGGAACACAACGTGGTGGCA  
CTGAAGGAGGCCATCAAGGACAAGGAGGAACCTCTGCACATAGCCAGACCCGGCTGTACCTCTCATACCCG  
CCCAACATGCAGCTGTGCCGGAAGCAGCCAGTTCAAGGTACTGCCTGGGCCTCTGAGGCAGTCCCAGGTGCCCC  
CGTCCACCTCCTCGCTGTGACCCCTCTCATAAACTCCAATCTCCACACACACATCCCCCAGAGGTGCTGAGAG  
GGGAGGGAGAGTTTGGCGCCACACACAACACGCAAGCACGCCTTAAACACACAGATATAGACATGACACTGGGCA

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**FIGURE 3946B**

GGTCATGGGTCGGGGGCCCTTCCAGTGCCAGGGACCTGTGCCCACGTGGTCTCACCCACCCTGTGCTACCTCATC  
TTCCCGGGAGGAAGCTCCTTCAGACAAGGTGAGCTCCTGGAGGCCACGGGGACAGAGAGGCCAGAGAGGGCCATT  
CCCTGCTGCCTTGAGGGTGCTGTCCCCACCTCTGGTGGAAGTATGACCTACGCCTGGGCTACAGGCATAGATGG  
GCCGTCTTTTGTTCCTTGTTAACGGATGCCTGGTGGCCCCCTTCTGAGCCTAAGTACCTTTCTTCCTTCCCTG  
CCCCTCAGTTCCTTCAAGGAACTGGGTGCCTCCTTCCGTCAAATATCAGGAATGAAAAGAACTGAGCCTGGTCGG  
CTGAGGCCAGTCTGTCTGTCTGAGGGTCGAGATTGCACGCGGGTCACTCATTCCCACTGAGGCCCGCGCTCCCTG  
GGAGGACCCTCGTAATTTATGCTCTGCCCTAGAGCCGCTTTCCTGGTGGGATCCTTTTCATGGCGTCTTCCCAGGA  
CCTCCTGCCAGCTCCCATTGGGAGTTTTGGGTCCCCTGCACCCCGGTAGGTGCATACTTCTGCCCTCCCCAGCCC  
CAGCTCACACACCCAACACCCCCAAGCTGGTGAGTGAGGTGGAGGAGCTGAACATGTCCATCACAGCGCTGTGGG  
AGAAGCTTCTAGAAGGGGAGCAGTCCCTTTGCAACCTCGAGGACATCCACATGAGCCTGGAGAAGGATGTTACCG  
CCATGACCAACAGTCTCTTCATCGACCGCCAGAAGTGCAATGGCCCATCGTACTTGCTACACCCCCATCCTGCAGC  
TGGCTGGCTACCACTGAGCAGCGGCACGGTGCTTCCCCCAATCCCCAAATAAACAGTGCATTAGCTTTC

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**FIGURE 3947**

MFPVSSGCFQEQQETNKS LPRSASTPETRTKFTQDNLCHAQRERLDSANLWVLVDCILRDTSEDLGLQCDAVNLA  
FGRRCEELEDVRHKLQHHLHKVGHPEPRRRLRRLPTTLPLITWPGPSTPFSSVPLIPRDPRSKCHLSVNLCKTR

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**FIGURE 3948**

ATGCTTCCGGCTCCCGCTCTGGAGACACGGGCCGGCCCCCTGCGTGTGGCACGGGCGGGCCGGGAGGGCGTCCCCG  
GCCCCGGCGCTGCTCCCGCGTGTGTCTGGGGTTGACCAGAGGGCCCCGGGCGCTCCGTGTGTGGCTGCGATGGTG  
GCGTTTTTGGGGACAGGCGTCCCTCGGCGCCTCTGCGGGCCCCGAGGAGGAGCGGCTGGCGGGTGGGGGGAGTGTG  
ACCCACCCTCGTTACGCGACCCCCGAGCGGTGCGGCTCCCCAACTTCTTAGAGGGACAAGTGGCGTTTCAGCCAC  
CCGAGATTGAGCAATAACAGGTCTGTGATGCCCTTAGATGTCCGGGGCTGCACGCGCGCTACACTGACTGGCTCA  
GCGTGTGCCTACCCTACGCCGGCAGGCGCGGGTAACCCGTTGAACCCCATTCGTGATGGGGATCGGGGATTGCAA  
TTATTCCCATGAACGAGGAATTCCCACTGGCCTTTGCCGGGCGACCCAGGGGAACCGCGTTGATGCTGCCTTC  
GGATCCTCCGGCGAAGACTTCCACCGGATGCCCCGAACTCATACCCAAGGGGCAGCTCGTCACCAGGGATGTG  
GAAGTACTCTACATCATCTCACACGGCTTTACCACTTTCACCTCCGTCATCGACAGAATTTCACTACTACGTT  
TCCCTTTCATAA

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**FIGURE 3949**

CGGGAGAAAGCCCCGCCCCGGCGCCCGCTCCCACTCCTGATTGGCCGGGCCAGCCCGGGGAGGCCCGGGGAC  
CCCCGCCCCGCTCTCAGCTATAAAGATAGCCCCGGCATGACAGCCGCGGCGAAGCTCTTCTAGTTTCATCTGCTGG  
CCGGCTCTCAGTCCCCGTGGCGCCCCCTTTCCTCTTGTCCCAGAGCGCTCTCGACTCCACCATGCCAAGGGGATT  
CCTGGTGAAGCGAACTAAACGGACAGGCGGCTTGTACCGAGTTCGCCTTGGCGAGCGTGTCTTCCCTCTGCTGGG  
GCCCCAGGGGGCGCCGCCCTTCTTGGAGGAGGCTCCCAGCGCCTCCTTGCCCGGCGCGGAGCGGGCGACACCCCC  
CACCCGAGAGGAACAGGAAAGGGGTTGACGGCGGAGGCGGCCCGGGAACAGTCGGGGTTCGCCATGTCGGGCGGC  
TGGGGTGAGCCCGGGGACGGGCGGGCGGGAAGGCGCGGAGTGGCGGGCGGGTGGCAGGGAAGGTCCCGGGCCAG  
CCCCAGCCCCAGCCCCAGTCCAGCGAAGCCGGCAGGCGCAGAGCTGCGTTCGGGCGTTCCTGGAGCGCTGCCTCAG  
CTCGCCCGTCTCCGCCGAGTCTTTCCCGGGGGCGCCGCCCGCTGGCCGCTTTCTCCTGCTCCGTGGCGCCAGC  
AGCCGCACCGACCCCGGGGGAGCAGTTTCTGCTGCCGCTTCGGGCGCCGTTCCAGAGCCCGCGCTTCAGCCGGA  
CCCTGCGCCCTCTCGGCCGCCCTTCAGAGTCTGAAGCGGGCGGCCGGCGGCGAGCGCCGCGGCAAGGCACCCAC  
GGACTGCGCGTCTGGACCCCGGGCGCGGGAATCAAGAAGCCAAAGGCCATGAGGAAGTTGAGCTTTGCCGATGA  
GGTGACCACATCCCTGTCTGGGCGTGAAGATCAAGGAGGAGAGCCCGGAGCGCCGTCCCGGGGCTTGGGGGG  
CAGCCGCACGCCACTGGGGGAGTTCATCTGCCAGCTGTGCAAGGAGCAGTACGCAGACCCCTTCGCGCTGGCCCA  
GCACCGCTGCTCCCGCATCGTGCCTGAGTACCGCTGCCCTGAGTGCACAAAGGTGTTAGCTGTCTGCGAA  
CCTGGCCTCCCATCGCCGCTGGCATAAGCCGCGTCTGCGGCTGCAAACGCCGCCACAGTCTCTCCGCCGACGG  
GAAGCCGCTTCTTCGTCTGTTCTGCTCTCCCGGGACTCCGGGGCCATTGCATCTTTCTGGCGGAGGGAAAGGA  
GAACAGCCGAATAGAGCGGACTGCGGATCAGCACCCGAGGCCAGGGACAGCTCCGGGGCGGATCAGCACCCGGA  
CAGCGCCCCGAGGCAGGGCCTCCAGGTGCTGACGCATCCAGAGCCACCGCTGCCTCAGGGCCCCCTACAGGAGGG  
GGTGTGGGGCGCCGGGTACCTGTGCCGGGCAGTACAGTGGTGGCAGGGGATCCGAGATTTTCGTGTGCCATA  
TTGCCACAAAAGTTTCGTGCGCAAGCCTATCTGCGCAAGCACCTGAGCACTACGAGGCGGGCTCGGCCCGTGC  
GCTAGCGCCGGGCTTTGGCTCCGAACGCGGTGCCCCACTTGCCCTTCGCTTGCCATTGTGCGGAGCGCACTTCCC  
TACAGCAGATATCAGGGAGAAGCACCGGCTGTGGCATGCTGTCCGCGAGGAGCTGCTCTGCCCGCTCTGGCGGG  
GGCTCCTCCCGAAACGTGCGGCCCTAGCGGGCCATCTGACGGGAGTGCCAGCAAATTTCTCGTGCAAGCACTG  
CCCGTCCACTTTTTTTAGCTCTCCAGGGCTGACCCGGCACATCAATAAGTGCCACCCCTCAGAAAGCCGGCAAGT  
GCTGCTGCTGCAGATGCCACTGCGGCCTGGCTGCTGAGGGACGAGAGACCAGGATGATTTCGAGGTTGGCCTTAG  
AGGAAACAGATCATGGGAATTTCTGTGGGGCTTTCTTCAACTTGCAAGTTTACTTTTCATTCTCTATGTTTTA  
ATCCCTAAAATTCTCCCTGTAGTCAATGTTCCACCAGAGGAGCGGACAGTGAAATGTAATATCCCTCTCTAGAG  
CAGGTATGTATATGGTATAAACCTTGAGATCAAAGACTGTCAGCTTTAAATCCTTCTCACTTTCCCACTAAAAT  
AGGATTTTTCCCTTAAACTCTGGAGACCCTAACGAATCCTATATGATTGTAAATTCCTATGGAAAGTCGCGGT  
GAATGCGTGCTGCTCAATGTCCACAAAGGATTCTGGCTACCCTTTGGTAGCCAATGTTTTTTTGTCTTGCA  
TCACAGGCGCCTATACAGCTTCTGTCTCAATAGGGTCAGATATTTGCACTGTATATTCTGTGAATTAAGTTA  
TGTGATTGGTGTCAAACCTTAAGGAGATTCAAGACCTGGCAGAAAATGTAAGAGGATTTTGTCTGCTTTTGGGGTG  
CATGGGGATCTCCCTGTAAACTTTCCTTTGCCCAATTATATGTACATGTCCATTCTTAAGTTGGTGTGGAGG  
TGGGGAGGATGCTACTTTACTGGAGTTGAGACACCCCTAAAATTCTACCCCTCAGCTATTTTGTGGGAGTATT  
CAGGAAGAGCTACTTCAAACCTTTCTTTAAATGGCTTTTGGAAATACAGAAGTCGTTTCTCAAGTTTGACTGT  
TTTAATGGGGTTTACCCAAATTGTTAATGCTTCTGCTGTAAATGTCATCTGTGATTGTAATGAAATATG  
TACAGCTTAAGGAAGATGTTAACACCTGTAATCCACTAAGGAAGTGAATGGCAATTTGCTCAATATTCAGTATT  
TCTTTTCAGCGGCACTTGTGTTTTGATTTTTTAAAAACCATTTTCAGTGTACATTGTGTACTAATTCCTACTA  
GCCAGTTTGGGACATTGGCTGAGCACTGCCTGACAGAAAGCCCGTATTTGTAAGATGCTTACCACCAATAAATG  
TACATAGACTGTG



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**FIGURE 3950**

TGCCGCCGTCCCGCCCGCCAGCGCCCCAGCGAGGAAGCAGCGCGCAGCCCGCGGCCAGCGCACCCGCAGCAGCG  
CCCGCAGCTCGTCCGCGCCATGTTCCAGGCGGCCGAGCGCCCCAGGAGTGGGCCATGGAGGGCCCCCGCGACGG  
GCTGAAGAAGGAGCGGCTACTGGACGACCGCCACGACAGCGGCCTGGACTCCATGAAAGACGAGGAGTACGAGCA  
GATGGTCAAGGAGCTGCAGGAGATCCGCCTCGAGCCGCGAGGAGGTGCCGCGCGGCTCGGAGCCCTGGAAGCAGCA  
GCTCACCGAGGACGGGGACTCGTTCTGCACTTGGCCATCATCCATGAAGAAAAGGCACTGACCATGGAAGTGAT  
CCGCCAGGTGAAGGGAGACCTGGCCTTCCTCAACTTCCAGAACAACCTGCAGCAGACTCCACTCCACTTGGCTGT  
GATCACCACCCAGCCAGAAATTGCTGAGGCACTTCTGGGAGCTGGCTGTGATCCTGAGCTCCGAGACTTTCGAGG  
AAATACCCCCCTACACCTTGCCTGTGAGCAGGGCTGCCTGGCCAGCGTGGGAGTCTGACTCAGTCTGCACCAC  
CCCGCACCTCCACTCCATCCTGAAGGCTACCAACTACAATGGCCACACGTGTCTACACTTAGCCTCTATCCATGG  
CTACCTGGGCATCGTGGAGCTTTTGGTGTCTTGGGTGCTGATGTCAATGCTCAGGAGCCCTGTAATGGCCGGAC  
TGCCCTTACCTCGCAGTGGACCTGCAAAATCCTGACCTGGTGTCACTCCTGTTGAAGTGTGGGGCTGATGTCAA  
CAGAGTTACCTACCAGGGCTATTCTCCCTACCAGCTCACCTGGGGCCGCCAAGCACCCGGATACAGCAGCAGCT  
GGGCCAGCTGACACTAGAAAACCTTCAGATGCTGCCAGAGAGTGAGGATGAGGAGAGCTATGACACAGAGTCAGA  
GTTACGGAGTTCACAGAGGACGAGCTGCCCTATGATGACTGTGTGTTTGGAGGCCAGCGTCTGACGTTATGAGC  
GCAAAGGGGCTGAAAGAACATGGACTTGTATATTTGTACAAAAAAAAGTTTATTTTCTAAAAAAGAAAAA  
GAAGAAAAAATTTAAAGGGTGTACTTATATCCACACTGCACACTGCCTGGCCAAAACGTCTTATTGTGGTAGGA  
TCAGCCCTCATTTTGTGCTTTTGTGAACTTTTGTAGGGGACGAGAAAGATCATTGAAATTCTGAGAAAACCTC  
TTTTAAACCTCACCTTTGTGGGGTTTTTGGAGAAGGTTATCAAAAATTTTCATGGAAGGACCACATTTTATATTTA  
TTGTGCTTCGAGTGACTGACCCAGTGGTATCCTGTGACATGTAACAGCCAGGAGTGTTAAGCGTTCAGTGATGT  
GGGGTGAAAAGTTACTACCTGTCAAGGTTTGTGTTACCCCTCCTGTAAATGGTGTACATAATGTATTGTTGGTAAT  
TATTTTGGTACTTTTATGATGTATATTTATTAAACAGATTTTACAAATG

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**FIGURE 3951**

GAGTTCGGCATGCAAGAGCGGAAGAAACGCGGCTGGTACCCCGGAAGCAGTCGCTGCAACTTCCGGGAGGTGCTT  
GTGTGCCTGGTGCGGGAGCTACGGGGCCAGGGATTGTGTTTAAAGTAGTGCTTCTACCAACATGTCCCGTGGTT  
CCAGCGCCGGTTTTGACCGCCACATTACCATTTTTTCACCCGAGGGTCGGCTCTACCAAGTAGAATATGCTTTTA  
AGGCTATTAACCAGGGTGGCCTTACATCAGTAGCTGTCAGAGGGAAAGACTGTGCAGTAATTGTCACACAGAAGA  
AAGTACCTGACAAATTATTGGATTCCAGCACAGTGACTCACTTATTCAAGATAACTGAAAACATTGGTTGTGTGA  
TGACCGGAATGACAGCTGACAGCAGATCCCAGGTACAGAGGGCACGCTATGAGGCAGCTAACTGGAAATACAAGT  
ATGGCTATGAGATTCCGTGTGGACATGCTGTGTAAGAATTGCCGATATTTCTCAGGTCTACACACAGAATGCTG  
AAATGAGGCCTCTTGGTTGTTGTATGATTTTAATTGGTATAGATGAAGAGCAAGGCCCTCAGGTATATAAGTGTG  
ATCCTGCAGGTTACTACTGTGGGTTTAAAGCCACTGCAGCGGGAGTTAAACAACTGAGTCAACCAGCTTCCTTG  
AAAAAAAAGTGAAGAAGAAATTTGATTGGACATTTGAACAGACAGTGGAACCTGCAATTACATGCCTGTCTACTG  
TTCTATCAATTGATTTCAAACCTTCAGAAATAGAAGTTGGAGTAGTGACAGTTGAAAATCCTAAATTCAGGATTC  
TTACAGAAGCAGAGATTGATGCTCACCTTGTTGCTCTAGCAGAGAGAGACTAAACATTGTCGTTAGTTTACCAGA  
TCCGTGATGCCACTTACCTGTGTGTTTGGTAACAACAAACCAACATCATGGAGGTCCCTGGATTGAAAAAGGAGC  
CTCTCCCACTCCTCCTACCACCGAAGTGGTTAGGACTCTATATAAATAAAAACAAGGCTTTTGG

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**FIGURE 3952**

MSRGSSAGFDRHITIFSPEGRLYQVEYAFKAINQGGLTSVAVRGKDCAVIVTQKKVPDKLLDSSTVTHLFKITEN  
IGCVMTGMTADSR SQVRARYEAA NWKYKYGYEIPVDM LCKRIADISQVYTQNAEMRPLGCCMILIGIDEEQGPQ  
VYKCDPAGYYCGFKATAAGVKQTESTSFLEKKVKKKFDWTFEQTVETAITCLSTVLSIDFKPSEIEVG VVTVENP  
KFRILTEAEIDAHLVALAERD

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**FIGURE 3953**

CTCTCGGCTTTTCGGCTTGGAGGAGGCCAAGGTGCAACTTTCTTTGGTCATTCCGCACCAGCCGCCTCCACCATGC  
CGCCAAAGTTTCGACCCCAACGAAATCAAAGTCGTATACCTGAGGTGCACCGGAGGTGAAGTCGGTGCCACTTCTG  
CCCTGGCCCCCAAGATCGGCCCCCTGGGTCTGTCTCCAAAAAAGGTTGGTGATGACATTGCCAAGGCAACGGGTG  
ACTGGAAGGGCCTGAGGATTACAGTGAAACTGACCATTGAGAACAGACAGGCCCCAGATTGAAGTGGTGCCCTTCTG  
CCTCTGCCCTAATCATCAAAGCTCTTAAGGAACCACCAAGACACAGAAAGAAATAGAAAAACATTAAACACCGTG  
GGAATATCACTTTTGATGAGATCGTCAACATTGCTTGACAGATGCGGCACTGATCCTTAGCCAGAGAACTCTCTG  
GAACCATTAAAGAGATCCTGGGGACTGCCCAGTCTGTGGGCTGTAAACGTTGATGGCCGCCACCCTCATGACATCA  
TAGATCACATCAACATTGGTGCTGTGGAATGCCCAGCCAGTTAAGCACAAAGGAAAATATTTTCAGTAAAGAATCA  
TTTGACAACCTGGTGA

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**FIGURE 3954**

MPPKFDPNKIKVYL RCTGGEVGATSALAPKIGPLGLSPKKVGDDIAKATGDWKGLRITVKLTIQNRQAQIEVVP  
SASALI I KALKEPPRHRKKRKT LNTVGISLLMRSSTLLDRCGTD SLARELSGTIKEILGTAQSVGCNVDGRHPHD  
IIDHINIGAVECPAS

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**FIGURE 3955**

GAAGAGGCGAGAACGACCCCCGGACTGACCAAAGCCCGCGCGCAGCTGCATCCCGCATCCAGCACCTACATCCCG  
CCACCGTCGTGGCCGTCAACCATGCCCAAGAGAAAGGCTGAAGGGGATGCTAAGGGAGATAAAGCCAAGGTGAAGG  
ACGAACCGCAGAGAAGATCCGCGAGGTTGTCTGCCAAACCTGCTCCTCCAAAGCCAGAGCCCAAGCCTAGAAAGT  
CCCCTGTAAAGAAGGGAGAGAAGGTACCCAAAGGGAAAAAGGAAAAGCTGATGCCAGGAGGAGGGATTCCCTG  
ACTCTGACACACATGGCCACCTTGGCACAAAAGCCTTGTGGTATAGAAAAACAAATTCGTTTTATGTCCTCTTC  
TCCTTTTCCATCTTTCAGCATAGACTTAACTCCCTTGAGCCGAGACATCTGTTGGGACCTGACCCCCAGTCATTG  
ATTACCAGTGTGTCAGGCAATCTGGACTTTCCAGTGATGCCACTGAGATGGCACCTGTCAAAAGAGCAGTGGTTC  
CATTCTAGATTGTGGATCTTCAGATAAATTCTGCCATTTTCATTTCACTTCCTGAAAGTCAGGGTCGGCTTGTG  
AAAAGTTGTTAAACAACATGCTAAATGTGAAATGTCAACCCTCACTCTAAACTTTCCCTGTTCAGAGCATCAGAT  
GAAGACTTCATTGGGTTTTATAGTGGCTTCTGATTTTTGGTAGTCCATTGAAGAAGGGAGTTTGAAAGTTGTTG  
TATACTGTTAACAATTGTCTGCCCATGTCCTGCCTGAAATACCA

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**FIGURE 3956**

MPKRKAEGDAKGDKAKVKDEPQRRSARLSAKPAPPKPEPKPRKSPVKKGEKVPKGKKGKADAE EEGFPDSDTHGH  
LGTKALWYRKINSFLCP LLLFHL SA

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**FIGURE 3957**

ACTTTACGCAGGCGCGTTAGGTCCTAGTCGCTATGCGTGTGCTTGTGGGTGGCGGGACAGGCTTCATTGGGACAG  
CCCTAACCCAGCTGCTGAATGCCAGAGGCCACGAAGTGACGTTGGTCTCCCGAAAGCCCGGGCCCGCCGGATCA  
CGTGGGATGAGCTCGCTGCATCGGGGCTGCCGAGCTGCGATGCCGCCGTCAACCTGGCCGGAGAGAACATCCTCA  
ACCCTCTCCGAAGATGGAATGAAACCTTCCAAAAAGAGGTAATCGGCAGCCGCCCTAGAGACCACCCAATTGCTGG  
CTAAAGCCATCACCAAAGCCCCACAACCCCCCAAGGCCTGGGTCTTAGTCACAGGTGTAGCTTACTACCAGCCCCA  
GTCTGACTGCGGAGTATGATGAAGACAGCCCAGGAGGGGACTTTGACTTTTTCTCCAACCTCGTAACCAAATGGG  
AAGCTGCAGCCAGGCTTCTGGAGATTCTACACGCCAGGTGGTGGTGCGCTCAGGGGTGTGTCTGGGCCGTGGGG  
GTGGTGCCATGGGCCACATGCTGCTGCCCTTTCGCCTGGGCCCTGGGGGGCCCCATCGGCTCAGGCCACCAATTCT  
TCCCCTGGATACACATCGGGGACCTGGCAGGAATCCTGACCCATGCCCTTGAAGCAAACCACGTGCACGGGGTCC  
TGAATGGAGTGGCTCCATCCTCCGCCACTAATGCTGAGTTTGCCCGACCTTGGGTGCTGCCCTGGGCCGCCGAG  
CCTTCATCCCTCTCCCCAGCGCTGTGGTGCAAGCTGTCTTTGGGCGACAGCGTGCCATCATGCTGCTGGAGGGCC  
AGAAGGTGATCCACAGCGAACACTGGCCACTGGCTACCAGTATTCCTTCCCAGAGCTAGGGGCTGCCTTAAAGG  
AAATTGTAGCCTAAGTAGGTCGTGGCAAGGGCCTGAGGCCTGTTCTCACAGGCTTCCAGGTTAGGCACCTGTGAA  
TAGGCTCAGCTCCTCTAGAGAGCTGAAGCCATCTGGTTCTTAGATTCTCTCCCAGTCTCTTTCCCATTTGTTCT  
GTTGCTCCACCTTATTGTCTCAAGGCCGTAATCTCATCAGGTTGGGACATTAATCTTTTCAACTCCTTGTAAGAT  
TTCCAGTTTGGTTTTCTCTACATGTCCTGCAGCTGCCCCACTTCTCCTTTACGCTGTGTAGAGAATGCTCTGCAG  
TTTAGGCAATAAAAAATAAATTGTCTCACT



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**FIGURE 3958**

ATGTCGTGCGTCAAGTTATGGCCCAGCGGTGCCCCGCCCCCTTGGTGTCCATCGAGGAACTGGAGAACCAGGAG  
CTCGTCGGCAAAGGCGGGTTTCGGCACAGTGTTCCGGGCGCAACATAGGAAGTGGGGCTACGATGTGGCGGTCAAG  
ATCGTAAACTCGAAGGCGATATCCAGGGAGGTCAAGGCCATGGCAAGTCTGGATAACGAATTCGTGCTGCGCCTA  
GAAGGGGTTATCGAGAAGGTGAACTGGGACCAAGATCCCAAGCCGGCTCTGGTGACTAAATTCATGGAGAACGGC  
TCCTTGTCGGGGCTGCTGCAGTCCCAGTGCCCTCGGCCCTGGCCGCTCCTTTGCCGCCTGCTGAAAGAAGTGGTG  
CTTGGGATGTTTTACCTGCACGACCAGAACCCGGTGCTCCTGCACCGGGACCTCAAGCCATCCAACGTCCTGCTG  
GACCCAGAGCTGCACGTCAAGCTGGCAGATTTTGGCCTGTCCACATTTCAAGGAGGCTCACAGTCAAGGACAGGG  
TCCGGGGAGCCAGGGGGCACCCCTGGGCTACTTGGCCCCAGAAGTGTGTTTAAACGTAAACCGGAAGGCCTCCACA  
GCCAGTGACGTCTACAGCTTCGGGATCCTAATGTGGGCAGTGCTTGCTGGAAGAGAAGTTGAGTTGCCAACCGAA  
CCATCACTCGTGTACGAAGCAGTGTGCAACAGGCAGAACCGGCCTTCATTGGCTGAGCTGCCCCAAGCCGGGCCT  
GAGACTCCCGGCTTAGAAGGACTGAAGGAGCTAATGCAGCTCTGCTGGAGCAGTGAGCCCAAGGACAGACCCTCC  
TTCCAGGAATGCCTACCAAAAAGTGAAGTCTTCCAGATGGTGGAGAACAATATGAATGCTGCTGTCTCCACG  
GTAAAGGATTTTCTGTCTCAGCTCAGGAGCAGCAATAGGAGATTTTCTATCCCAGAGTCAGGCCAAGGAGGGACA  
GAAATGGATGGCTTTAGGAGAACCATAGAAAACAGCACTCTCGTAATGATGTCATGGTTTCTGAGTGGCTAAAC  
AAACTGAATCTAGAGGAGCCTCCAGCTCTGTTTCTAAAAAATGCCCGAGCCTTACCAAGAGGAGCAGGGCACAA  
GAGGAGCAGGTTCCACAAGCCTGGACAGCAGGCACATCTTCAGATTTCGATGGCCCAACCTCCCCAGACTCCAGAG  
ACCTCAACTTTTCAAAAACAGATGCCAGCCCTACCTCAACTGGAACACCAAGTCCTGGACCCCGAGGGAATCAG  
GGGGCTGAGAGACAAGGCATGAACTGGTCCTGCAGGACCCCGAGCCAAATCCAGTAACAGGGCGACCGCTCGTT  
AACATATACAAGTCTGCTGGGGTGCAAGTTGGAGACAACAATACTTACTATGCAACAGACAAGTGCCTTGCCC  
ACATGGGGCTTGGCACCTTCGGGCAAGGGGAGGGGCTTGCAAGCAACCCCAAGTAGGTTTCGCAAGAAGGCCCT  
AAAGATCCTGAAGCCTGGAGCAGGCCACAGGGTTGGTATAATCATAGCGGGAATAA

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**FIGURE 3959**

GGGGCAAGGGAAGCTAGTAGCGGAGCCGGAAGTGAGGCACCCTCGGGCTCGAGACAGCGGCGACGTTTAAAGCTG  
AGCGACCCAGTGCCACTGGAGACGGTCAGCTTCTCCACTCAGGCTCCTCCAGCCCGAGCCAGAAGACCCCTCCC  
CCAGAATTCTGGGGGCCGATGGAAGGGAGCCGAGTCAGATCGCGAGGTACCCAGAGCCGACAGACCCGGAGCGACA  
GGGAGTTGCCAGAAGCCCCGCCCTAGGAGTGATCGGAAAGCCTCACCCATCCGGGTGAGGAACCCGGAGGGACC  
GCCTCCGGGGCGGAGCCCGCCGACCATGGCTACGCCCCCTGGTGGCGGGTCCCGCAGCTCTACGCTTCGCCGCCGCG  
GCTAGCTGGCAGGTTGTGCGCGGACGCTGCGTGGAAACATTTTCCGCGAGTACTGGAGTTTCTGCGATCTCTGCGC  
GCTGTTGCCCCCTGGCTTGGTTTCGCTACCGGCACCACGAACGCCTTTGTATGGGCCTAAAGGCCAAGGTGGTGGTG  
GAGCTGATCCTGCAGGGCCGGCCTTGGGCCCAAGTCCTGAAAGCCCTGAATCACCACTTTCCAGAATCTGGACCT  
ATAGTGCGGGATCCCAAGGCTACAAAGCAGGATCTGAGGAAGATTTTGGAGGCACAGGAAACTTTTTACCAGCAG  
GTGAAGCAGCTGTGAGAGGCTCCTGTGGATTTGGCCTCGAAGCTGCAGGAACTTGAACAAGAGTATGGGGAACCC  
TTTCTGGCTGCCATGGAAAAGCTGCTTTTGTAGTACTTGTGTGCTGAGTGGAGAAAGCACTGCCTACACCGCAGGCA  
CAGCAGCTTCAGGATGTGCTGAGTTGGATGCAGCCTGGAGTCTCTATCACCTCTTCTCTTGCCTGGAGACAATAT  
GGTGTGGACATGGGGTGGCTGCTTCCAGAGTGCTCTGTTACTGACTCAGTGAACCTGGCTGAGCCCATGGAACAG  
AATCCTCCTCAGCAACAAAGACTAGCACTCCACAATCCCCTGCCAAAAGCCAAGCCTGGCACACATCTTCCTCAG  
GGACCATCTTCAAGGACGCACCCAGAACCCTTAGCTGGCCGACACTTCAATCTGGCCCCCTTAGGCCGACGAAGA  
GTTTCAGTCCCAATGGGCCCTCCACTAGGGGAGGCCATAAGGAGCGCCCCACAGTCATGCTGTTTCCCTTTAGGAAT  
CTCGGCTCACCAACCCAGGTCATATCTAAGCCTGAGAGCAAGGAAGAACATGCGATATACACAGCAGACCTAGCC  
ATGGGCACAAGAGCAGCCTCCACTGGGAAGTCTAAGAGTCCATGCCAGACCCTGGGGGAAGGGCTCTGAAGGAG  
AACCCAGTTGACTTGCCTGCCACAGAGCAAAAAGGAGAATTGCTTGGATTGCTACATGGACCCCTGAGACTATCA  
TTATTACCTCCTAGGGCCAGGAAGCCAGTGTGTCTCCGTCTCTGTGCAGCTCCGTCATTACCATAGGGGACTTG  
GTTTTAGACTCTGATGAGGAAGAAAATGGCCAGGGGGAAGGAAAGGAATCTCTGAAAACTATCAGAAGACAAAG  
TTTGACACCTTGATACCCACTCTCTGTGAATACCTACCCCTTCTGGCCACGGTGCCATACCTGTTTCTTCTGT  
GACTGTAGAGACAGTTCTAGACCTTTGTGATAGAACTAAAATGCTCTCTGTACTCTAGTCTCCTGCCTCCTCAGC  
TCTGCAAGTAGTTTAGTAGGAATGAAGTGGAAGTCCAGGCTTGGATTGCCTAACTACACTGCTAAAAATATTTGT  
AATCCTTAATAATTAACTTTGGATTTGTT

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**FIGURE 3960**

CCATGGAGTCAGCCGGGCTAGAGCAGCTCCTACGGGAGCTGCTGCTACCGGACACCGAGCGCATCCGTCGGGGCCA  
CGGAACAGCTCCAGATCGTTCTTCGGGCCCCCGCCGCTTTGCCGGCTCTCTGCGACCTGCTAGCCTCGGCGGGCCG  
ACCCCCAGATCCGCCAGTTTTCGGGCCGTGCTGACCCGAGAGCTGAACACCCGCTGGCGACGGCTGGCGGGCGG  
AGCAACGGGAGAGCCTCAAGTCCCTGATCCTGACGGCCCTGCAGAGAGAAACAGAGCACTGTGTGAGCCTCAGCC  
TGGCCCAGCTCTCAGCCACCATTTTTCGAAAGGAAGGCTTGGAGGCCTGGCCACAGCTTTTGCAGCTGCTTCAGC  
ACAGTACCCACAGCCCCACAGCCAGAGAGAGATGGGGCTTTTGTGCTAAGTGTGGTGGTGACCTCCCCGGC  
CCGAGGCCTTCCAACCCACCACCGGGAGCTTCTTCGGCTTCTGAATGAGACTCTTGGTGAGGTGGGCTCTCCTG  
GGCTGCTCTTCTACTCCCTGCGCACTCTGACCACCATGGCTCCCTACCTCAGCACTGAAGATGTGCCTCTCGCTC  
GGATGTTGGTGCCCAAGCTGATCATGGCCATGCAGACTCTGATCCCCATAGATGAGGCAAAGGCCTGTGAGGCCC  
TTGAGGCTTTGGATGAAGTGTGGAGTCAGAGGTGCCGGTCATACCCCCCTACCTCTCTGAAGTCTCACATTCT  
GCCTGGAGGTAGCTAGAAATGTGGCCCTGGGCAATGCGATACGCATACGTATTCTCTGCTGCCTCACTTTCTTGG  
TCAAAGTCAAGAGCAAGGCCTTACTGAAGAATCGTCTCCTGCCACCCTTGCTGCACACCCTTTTCCCCATTGTGG  
CTGCTGAGCCCCACAGGCCAGTTGGATCCCGAGGACCAGGATTGAGAAGAGGAAGAGTTGGAGATTGAGCTGA  
TGGGGGAGACTCCAAGCATTTCGCTGTACAAGTTGTGGACATGCTGGCACTACACCTGCCCCCGAGAAGCTCT  
GTCCCCAGCTGATGCCCATGTTGGAAGAGGCTTTGCGGAGCGAGAGCCCATACCAGCGCAAAGCTGGACTCCTGG  
TGCTGGCCGTGCTGTCTGACGGAGCTGGCGACCACATCAGGCAGAGACTGCTGCCCCCACTGCTGCAGATTGTGT  
GCAAGGGCCTGGAGGACCCCTCGCAAGTTGTACGCAATGCTGCGCTGTTTGCCTGGGCCAGTTCTCAGAAAACC  
TACAGCCCCATATCAGCAGCTATTCAAGGGAGGTAATGCCACTGCTCCTCGCCTACTTGAAGTCGGTGCCCTCTG  
GACACACACACCACCTAGCCAAGGCCTGCTATGCCCTGGAGAATTTTGTGGAGAACCTAGGGCCCCAAGGTGCAGC  
CCTACCTTCCGGAGCTTATGGAATGCATGCTGCAGCTTCTGAGGAACCCAGCAGTCCCCGGGCCAAGGAGCTGG  
CTGTGAGCGCCCTGGGAGCCATTGCTACGGCTGCCCAGGTCTCGCTGCTGCCCTACTTCCCTGCCATCATGGAGC  
ACCTGCGGGAATTCTGTTAACAGGCCGTGAGGACCTTCAGCCTGTGCAGATCCAGAGCCTGGAGACACTGGGGG  
TGCTGGCACGAGCAGTGGGGGAGCCCATGAGGCCGTGGCTGAGGAATGCTGCCAGCTGGGTCTGGGCCTCTGCG  
ACCAGGTAGACGACGCTGACTTGCGGCGCTGCACGTACAGCCTATTTCAGCCTTATCGGGTCTGATGGGTGAGG  
GCCTGGCGCCCCACTTGAACAGATCACCACGCTCATGCTGCTGTCACTGCGTTCCACCGAGGGCATTGTGCCTC  
AGTATGACGGGAGCAGCTCCTTCCTTCTGTTTGACGATGAGAGTGATGGGGAAGAAGAGGAGGAGCTCATGGATG  
AGGATGTGGAAGAAGAGGATGACTCAGAGATCTCAGGGTACAGCGTGGAGAATGCCTTCTTCGATGAGAAGGAAG  
ACACCTGTGCTGCCGTGGGGGAGATCTCTGTGAACACCAAGTGTGGCCTTCTTCCATACATGGAAGTGTCTTTG  
AAGAAGTATTTAACTGCTGGAGTGCCCTCACCTGAATGTGCGGAAGGCAGCCCATGAGGCTCTGGGTGAGTTT  
GCTGTGCACTGCACAAGGCCTGTCAAAGCTGCCCCCTCGGAACCCAACTGCTGCTTTGCAGGCTGCCCTGGCCC  
GAGTCGTGCCATCCTACATGCAGGCAGTGAACAGGGAGCGGGAACGCCAGGTGGTGATGGCCGTGCTGGAGGCCC  
TGACAGGGGTGCTCCGCAGCTGTGGGACCCTCACACTGAAGCCCCCTGGGCGCCTCGCTGAGCTCTGTGGCGTGC  
TCAAGGCTGTGCTGCAGAGGAAGACAGCCTGTGAGGATACTGACGAGGAGGAGGAAGAGGAAGATGATGATCAGG  
CTGAATACGACGCCATGTTGCTGGAGCACGCTGGAGAGGCCATCCCTGCCCTGGCAGCCGCGGCTGGGGGAGACT  
CCTTTGCCCCATTCTTTGCCGTTTCTTGCCATTATTGGTGTGCAAGACAAAACAGGGCTGCACAGTGGCAGAGA  
AGTCCTTTGCAGTGGGGACCTTGGCAGAGACTATTAGGGCCTGGGTGCTGCCCTCAGCCAGTTTGTGTCTCGGC  
TGCTCCCTGTGCTGTTGAGCACCGCCCAAGAGGCAGACCCGAGGTGCGAAGCAATGCCATCTTCGGGATGGGCG  
TGCTGGCAGAGCATGGGGGCCACCCTGCCCAGGAACACTTCCCCAAGCTGCTGGGGCTCCTTTTCCCCCTCCTGG  
CGCGGGAGCGACATGATCGTGTCCGTGACAACATCTGTGGGGCACTTGCCCGCCTGTTGATGGCCAGTCCCACCA  
GGAAACCAGAGCCCCAGGTGCTGGCTGCCCTACTGCATGCCCTGCCACTGAAGGAGGACTTGGAGGAGTGGGTCA  
CCATTGGGCGCCTCTTCAGCTTCTGTACCAGAGCAGCCCTGACCAGGTTATAGATGTGGCTCCCGAGCTTCTGC  
GTATCTGCAGCCTCATTCTGGCTGACAACAAGATCCCACCAGACACCAAGGCCGCACTGTTGTGCTCCTGACGT  
TCCTGGCCAAACAGCACACCGACAGCTTCAAGCAGCTCTGGGCTCACTGCCTGTTGACAAGGCTCAGGAGCTCC  
AGGCTGTACTGGGCTCTCCTAGACTGCAGGCTGCAGCCAGTCCAGAGAGAATAGAGCCTGCCCA

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**FIGURE 3961**

MESAGLEQLLRELLLPDTERIRRATEQLQIVLRAPAALPALCDLLASAADPQIRQFAAVLTRRRINTRWRRLAAE  
QRESLKSLILTALQRETEHCVSLSLAQLSATIFRKEGLEAWPQLLQLLQHSTHSPHSPEREMGLLLSVVTSRP  
EAFQPHHRELLRLLNETLGEVGSPLLFFYSRLTLTTMAPYLSTEDVPLARMLVPKLIMAMQTLIPIDEAKACEAL  
EALDELLESEVPVITPYLSEVLTFCLEVARNVAGNAIRIRILCCLTFLVKVSKALLKNRLLPPLLHTLFPPIVA  
AEPPPGQLDPEDQDSEEELEIELMGETPKHFAVQVVDMLALHLPPEKLCQIMPMLEEALRSESPYQRKAGLLV  
LAVLSDGAGDHIRQRLPPLLQIVCKGLEDP SQVVRNAALFALGQFSENLP HISSYSREVMP LLLAYLKSVPLG  
HTHHLAKACYALENFVENLGPKVQPYLPPELMECMLQLLRNPSSPRAKELAVSALGAIATAAQVSLPYFPAIMEH  
LREFLLTGREDLQPVQIQSLETGLVLRARAVGEPMRPLAECCQLGLGLCDQVDDADLRRCYSLFAALSGLMGE  
LAPHLEQITTLMLLSLRSTEGIVPQYDGSSSFLFDDESDEEEELMDEDVEEEDDSEISGYSVENAFFDEKED  
TCAAUGEISVNTSVAFLPYMESVFEEVFKLLECPHLNVRKAAHEALGQFCCALHKACQSCPSEPNTAALQAALAR  
VVP SYMQAVNRERERQVMAVLEALTGVLRSCGTLTLKPPGR LAELCGVLKAVLQKRTACQDTDEEEEEEEDDDQA  
EYDAM LLEHAGEAIPALAAAAGGDSFAPFFAGFLPLL VCKTKQGCTVAEKSFAVGTLAETIQGLGAASAQFVSRL  
LPVLLSTAQEADPEVRSNAIFGMGVLAEHGGHPAQEHFPKLLGLLFP LLARERHDRVDRDNICGALARLLMASPTR  
KPEPQVLAALLHALPLKEDLEEWVTIGRLFSFLYQSSPDQVIDVAPELLRICSLILADNKIPDTPKAALLLLLT  
LAKQHTDSFQAALGSLPVDKAQELQAVLGLS

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**FIGURE 3962**

ATCTAATGAGGAGCGAGGTGCGGTGCCCCGAAGCGCTCGCTTCCCGCGGTGCGATCTAGTCCTGCAGTAGGCGGC  
CCGGGGCCACACCGCGGCCGCCCAAGCCAGTGCAAGGCCAGGGGCTGACATCGCTCCCAGCGCTCGAGGACCG  
AGGCCTGCTGTGGAGGACACCGTGCTCCCTCGGGACCTGCTCTGGATTCCGGCCCGGACGTCCCTTTGGAGCTCT  
GCATCTCCAACCTGGAACCCAACCCAGAAGTCTCAAGTTTGACGCATCACGTGGCGTGCGGATCCACTGAGGGTC  
CACAGAGAGGGGGCCCCATCTCCTGCGTCTCAGTTATCCTGGTGTTGGGAATTCTGTGCCCTAAAGAATTCCGAC  
TCAGATCCGAACGGGGATCTGGTGGAATCGAGGGTGAAAGACCAGAGGGACAATGTTTCTACTATCCCAACGTGCT  
TCAGCGCCACACCGGCTGCTTTGCCACCATCTGGCTGGCGGCGACTCGCGGCAGCCGGTTGGTGAAGCGCGAATA  
CCTGAGGGTGAAATGTGGTGAAAACCTGCGAGGAAATCCTCAATTACGTGCTGGTACGAGTGCAACCCCGCAGCC  
CGGCCTGCGCGGCCCGCTTCTCCCTCTATCTCTCAGCCCAACTTCAGATCGGTGTGATCCGCGTCTATTCTCA  
ACAATGCCAGTACCTCGCGGAGGACATCCAGCACATCTTGGAGCGCCTCCACCGTGCCAGCTGCAGATCCGAAT  
AGATATGGAGACTGAGCTACCCAGCCTGCTGCTTCCCTAACACCTGGCCATGATGGAGACCCCTAGAAGATGCTCC  
AGATCCCTTTTTTGGGATGATGTCTGTGGATCCCAGACTTCCTAGTCCTTTGATATCCCTCAGATTCGACACCT  
CTTAGAGGCTGCAATCCAGAGAGAGTTGAAGAGATCCCTCCTGAAGTTCCTACAGAGCCCAGGGAGCCAGAGAG  
GATTCGGGTCACTGTGCTGCCACCTGAGGCCATCACGATCCTGGAGGCAGAGCCCATACGGATGCTGGAGATTGA  
GGGTGAACGGGAGCTCCAGAGGTGACCGCCGAGAAGTGGACCTGCTGATCGCAGAGGAAGAAGAAGCTATCTT  
GTTAGAAATCCCGCGGCTCCACCTCCAGCTCCTGCAGAGGTGGAAGGAATAGGAGAGGCACTGGGTCTTGAGGA  
GCTGAGGCTGACAGGCTGGGAACCTGGGGCCCTACTCATGGAGGTGACCCCCCGGAGGAGCTGCGTCTGCCAGC  
CCCACCCAGCCAGAGAGGAGGCCCCAGTCCCCCACCCTCCTCGCCGCGCCGTCGTCGCGGTTACTGTTCTG  
GGACAAGGAGACTCAGATCTCCCCGGAGAAATTCAGGAACAACTGCAAACCAGAGCCCACTGCTGGGAATGTCC  
TATGGTGACCGCCCGAGAGGACCATCAGAGGCCCTGCGGAGTTGTTTCAAGACCCCAACTCTCTCTGGCTGGCT  
ACCCCTGAACTACTGGGTCTCTGGACCCATTGTGCCAGCCACCCCAAAAGCCCTCAGGCGAGAGCTGCCTGA  
GGAGGCAGCCGCTGAGGAGGAAAGGAGAAAGATTGAAGTTCCAAGTGAGATTGAGGTCCCGAGGGAGGCCCTGGA  
GCCAGTGTTCCCTTATGGTGCTTTTAGAGATCTCCCTAGAGGCAGCTGAAGAGGAGAAGTCCCGCATCAGCCT  
CATCCCACCAAGAAGACGGTGGGCCTGGCCTGAGGTGGAGGCGCCAGAAGCTCCTGCATTGCCCGTGGTGCTGA  
ACTCCCTGAGGTGCCCATGGAGATGCCTTTGGTGCTGCCCCCAGAGCTCGAGCTGCTCTCACTGGAAGCAGTGCA  
CAGGGCAGTGGCACTGGAGCTGCAGGCTAACAGGGAGCCCGACTTCAGCAGCCTGGTGTCACCTCTCAGCCCCG  
CAGGATGGCTGCCCGGCTCTTCTACCTGCTCCTGGTGCTCTCAGCGCAACAGATTCTTCAGTGAAACAAGAAAA  
GCCATATGGTCGCTCCTGATCCAGCCGGGGCCAGATTCCACTGAGGTTAGAGTCCATTTACAAAGCTGCCAGG  
AAACCGGCCACTTCTAGTAAACACGTCGTGCCTCACTGGGTCCTGCTTACCTCATTCTGAATGTGCATTTCGA  
GCCTTCTGCTCTCAGAGCTATTGTTCAAGCAGAAAACAAGCTGCTTTTATTACAGT

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**FIGURE 3963**

MFYYPNVLQRHTGCFATIWLAAATRGSRILVKREYLRVNVVKTCEEILNYVLVRVQPPQGLPRPRFSLYLSAQLQI  
GVIRVYSQQCQYLAEDIQHILERLHRAQLQIRIDMETELPSILLPNHLAMMETLEDAPDPFFGMMSVDPRLPSPF  
DIPQIRHLLEAAIPERVEEIPPEVPTREPERIPVTVLPPPEAITILEAEPIRMLEIEGERELPEVSRRELDLLI  
AEEEEAILLEIPRLPPPAPAEVEGIGEALGPEELRLTGWEPGALLMEVTPPEELRLPAPPSPERRPPVPPPPRRR  
RRRRLFWDKETQISPEKFQEQQLQTRAHCWECPMVQPPERTIRGPAELFRPTLSGWLPPPELLGLWTHCAQPPPK  
ALRRELPEEAAAEEERRKIEVPSEIEVPREALEPSVPLMVSLEISLEAAAAEKSRLIPPEERWAWPEVEAPEA  
PALPVPELPEVPMEMPLVLPPPELELLSLEAVHRAVALELQANREPDFSSLVSPSPRRMAARVFYLLLVLSAQQ  
ILHVKEKPYGRLLIQGPRFH

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**FIGURE 3964**

CCCCGCTTCCATACCTCCCCGGCTCCGCTCGGTTCTTGCCACCCCGCAGCCCCTGCCAGGTGCCATGGCCGCA  
TTGTACCGCCCTGGCCTGCGGCTTAAGTGGCATGGGCTGAGCCCCCTTGGGCTGGCCATCATGCCGTAGCATCCAG  
ACCCTGCGAGTGCTTAGTGGAGATCTGGGCCAGCTTCCCACTGGCATTGAGATTTTGTAGAGCACAGTGCCCCG  
CTGTGCCAACCAGAGGGCATCCACATCTGTGATGGAAGTGGGCTGAGAATACTGCCACACTGACCCTGCTGGAG  
CAGCAGGGCCTCATCCGAAAGCTCCCCAAGTACAATAACTGCTGGCTGGCCCGCACAGACCCCAAGGATGTGGCA  
CGAGTAGAGAGCAAGACGGTGATTGTAACCTCTTCTCAGCGGGACACGGTACAACCTCCCGCCTGGTGGGGCCCCG  
GGGCAGCTGGGCAACTGGATGTCCCCAGCTGATTTCCAGCGAGCTGTGGATGAGAGGTTTCCAGGCTGCATGCAG  
GGCCGACCATGTATGTGCTTCCATTACGATGGGTCTGTGGGCTCCCCGCTGTCCCGCATCGGGGTGCAGCTC  
ACTGACTCAGCCTATGTGGTGGCAAGCATGCGTATTATGACCCGACTGGGGACACCTGTGCTTCAGGCCCTGGGA  
GATGGTGACTTTGTCAAGTGTCTGCACTCCGTGGGCCAGCCCTGACAGGACAAGGGGAGCCAGTGAGCCAGTGG  
CCGTGCAACCCAGAGAAAACCCCTGATTGGCCACGTGCCCCGACCAGCGGGAGATCATCTCTTCGGCAGCGGCTAT  
GGTGGCAACTCCCTGCTGGGCAAGAAGTGCTTTGCCCTACGCATCGCCTCTCGGCTGGCCCGGGATGAGGGCTGG  
CTGGCAGAGCACATGCTGATCCTGGGCATCACCAGCCCTGCAGGGAAGAAGCGCTATGTGGCAGCCGCTTCCCT  
AGTGCTGTGGCAAGACCAACCTGGCTATGATCGGGCCTGCACTGCCAGGCTGGAAAGTGGAGTGTGTGGGGGAT  
GATATTGCTTGGATGAGGTTTGACAGTGAAGGTCGACTCCGGGCCATCAACCCTGAGAACGGCTTCTTTGGGGTT  
GCCCCGTGTACCTCTGCCACCACCAATCCCAACGCCATGGCTACAATCCAGAGTAACACTATTTTTACCAATGTG  
GCTGAGACCAGTGATGGTGGCGTGTACTGGGAGGGCATTGACCAGCCTCTTCCACCTGGTGTTACTGTGACCTCC  
TGGCTGGGCAAACCCCTGGAACCTGGTGACAAGGAGCCCTGTGCACATCCCAACTCTCGATTTTGTGCCCCGGCT  
CGCCAGTGCCCCATCATGGACCCAGCCTGGGAGGCCCCAGAGGGTGTCCCCATTGACGCCATCATCTTTGGTGGC  
CGCAGACCCAAAGGGGTACCCCTGGTATACGAGGCCCTTCAACTGGCGTCATGGGGTGTGTTGTGGGCAGCGCCATG  
CGCTCTGAGTCCACTGCTGCAGCAGAACACAAAGGGAAGATCATCATGCACGACCCATTTGCCATGCGGCCCTTT  
TTTGGCTACAACCTTCGGGCACTACCTGGAACACTGGCTGAGCATGGAAGGGCGCAAGGGGGCCAGCTGCCCCGT  
ATCTTCCATGTCAACTGGTTCCGGCGTGACGAGGCAGGGCACTTCTGTGGCCAGGCTTTGGGGAGAATGCTCGG  
GTGCTAGACTGGATCTGCCGGCGGTTAGAGGGGGAGGACAGTGCCCGAGAGACACCCATTGGGCTGGTGCCAAAG  
GAAGGAGCCTTGATCTCAGCGGCCTCAGAGCTATAGACACCACTCAGCTGTTCTCCCTCCCCAAGGACTTCTGG  
GAACAGGAGGTTCTGTGACATTCTGGAGCTACCTGACAGAGCAGGTCAACCAGGATCTGCCCCAAGAGGTGTTGGCT  
GAGCTTGAGGCCCTGGAGAGACGTGTGCACAAAATGTGACCTGAGGCCCTAGTCTAGCAAGAGGACATAGCACCC  
TCATCTGGGAATAGGGAAGGCACCTTGAGAAAATATGAGCAATTGATATTAACTAACATCTTCAATGTGCCAT  
AGACCTTCCCACAAAGACTGTCCAATAATAAGAGATGCTTATCTATTTT

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**FIGURE 3965**

MAALYRPGLRLNWHGLSPLGWPSCRSIQTLRVLSGDLGQLPTGIRDFVEHSARLCQPEGIHICDGTEAENTATLT  
LLEQQGLIRKLPKYNNCWLARTDPKDVARVESKTVIVTPSQRDITVQLPPGGARGQLGNWMSPADFQRAVDERFPG  
CMQGRIMYVLPPFSMGPVGSPLSRIGVQLTDSAYVVASMRIMTRLGTPVLQALGDGDFVKCLHSVGQPLTGQGEPV  
SQWPCNPEKTLIGHVPDQREIISFGSGYGGNSLLGKKCFALRIASRLARDEGWLAEHMLILGITSPAGKKRYVAA  
AFPSACGKTNLAMMRPALPGWKVECVGDDIAWMRFDSEGLRAINPENGFFGVAPGTSATTNPAMATIQSNTIF  
TNVAETSDGGVYWEGIDQPLPPGVTVTSWLGPWKPGDKEPCAHPNSRFCAPARQCPIMDPAWEAPEGVPIDAI  
FGGRRPKGVPLVYEAFNWRHGVFVGSAMRSESTAAAEHKGIIMHDPFAMRPFPGYNFGHYLEHWLSMEGRKGAQ  
LPRIHFVNWFRRDEAGHFLWPGFGENARVLDWICRRLEGEDSARETPIGLVPKEGALDLSGLRAIDTTQLFSLPK  
DFWEQEVDRDIRSYLTEQVNQDLPKEVLAELEALERRVHKM



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**FIGURE 3966**

TACATTGGGTCTACTGCACAAATTACAGGGCTCCAAGTGTCTTATGAGAGCAGGACTTGGGCTGACCATGTCTCT  
CTGCCCTCACCCATGCTCTGCTCTGATTTCAGATCCTAAGTGTGAACGTGAAGTCCCCAGCCCTGCTGCTGAGCC  
AGTTGCTGCCCTACATGGAGAACAGGTATGGCAGGGCGGGGGTGGGGACCAGTCGGAGTTGGGGACCTGAGGTGG  
GCACAGAAATACAGTCGGTAGCACAGCCAGTAGTGGGTAGAGGACAGAAGAGGTCTGGGATCTCCACATCCCTCA  
TCTTCTTGCTCCTGCCCTCCCCATCTGTGTGGCTGCCATTCCCAATTCCAGTGGCTGCAGGATGAGAGTAGTATTCC  
AGGGGCCAGGCATAGCCTCCTTGGCCTTGACATCAGCAGGTTTGGGACAAGGCTATGCTTTAACTCCTTGACCT  
TGTGGGCTGGTCAATTGTACCTTACCTGCTCTCTGTTCTTACCAACTTAAAACCAATGACAGGGTTAGCCCCATT  
CCTCTCCATAGGAAAAAGCCTGTCCCAGACCTCTCCTCATGCCCTGCGCTTGGTCTCCAGGGACCTGCGCTGTGT  
CCAGGTCTGCAGATCTGACTGTACCCCTCACAGACACACCCCTTAGGAACTGGCCAGGGGGCTGTCTTCAGTAGAA  
GGAAAGTTCCCTGACTGTCACTTCTGGTCTCCCTTACCCCATCTGCTCCTTAGAGGTTGCTCATTGATAGGCACTC  
ACCATCAGCCTTGGGTGCCCTCTTCAAAAGCCACCCCTGCCCTCTCCTTCAAGCACCTGGCAAGAGAGGAAGCAG  
AAGATAAGGGTTCTGAGCATGGACATCGTATTATGAGAAATAGGCATGGAATCCTAGCTCTGCCGTGTATTGGC  
TGGTACTAAACCTTTCTGAGCCTCAGTTTTCTGAACTCTGAGATGGGGACAGTAATAGGACCTGTGTGCTTCTG  
TGAGGGTTGCATCATTTAATGAACTCATGATAGTGTACCATCAGTGGTAAGCTCTTAGCTTCAGCTTCTCTTAT  
GTTTGTCTTGCTCAGGAGGGGTGCTGTATCCTGGTCTCTTCCATTGCAGCTTATAATCCAGTAGTGGTAAGTG  
CTTGGTCTTGCTCCTGAGTGGTATAGGGTGAGGGGCAACTTGTCTTTTCCCTCAGAGCCTTACAGACAAAG  
TGCCCTGGGACAGACCCCAACCATCCTCCTGCTGCCCTGGGCTGAGCTTGTCTCCATGTGGGTGGGAGGGCTGCTG  
GGCCTGTGAGATCCCTGTAGGTGAGAAATCCAACCTGATGCTTTCCCCCACTCTCCCATATCCTAATCACTCTGTC  
AATTCCCTTCCCAGGCGCTGGGTGTCTACAATGTCAGCAAGACAGCGCTGCTGGGTCTCACTAGAACACTGGCAT  
TGGAGCTGGCCCCCAAGGACATCCGGGTAACTGCGTGGTTCCAGGAATTATCAAACTGACTTCAGCAAAGTGG  
TGAGGATTGGGTGTGTCTTCCATCTCCCAGTCTGGCTCAGTGGGAACCCCTTCCAGTGAATAAGGGATCAAGGGG  
TGACTGAATCCTTAGGTGAGCATGCCTATGACTGAGGTCTCATTGTTCTCTGAACTCAGCCATGGTGCAGTCCA  
TCCATCCTGAAAAGATGCTCCTTCTTTTGAAGGGCAAAGCTGCCCTAGGTGTTCTGCCTGGTGGCCTTCCCGG  
GGCCCTGCCCATCTTGTTTTAGTAGCACTGACTCCTTCATTCTTCCCTTGGCCAGTTTCATGGGAATGAGTCT  
CTCTGGAAGAACTTCAAGGAACATCATCAGCTGCAGAGGCAAGTGGGGTTTGGAGATTGGTGGTCCATGTGTGG  
CTAGGCAGGGGCAGTTGAGTCTATTGCAAGAGCAGACCCCTCCCTGTCATCTGGCCATTGTTTTGCTGAAATCT  
GGAGTCCACATGGCCCTGGAGGGTGCAAGTAGCCCTGCTGCATCCACCTTGTTCCCATGGAGCCCACTCCCACC  
TGTCATCCGTGAGCCCCAGAGCAGCAGAATCAGAGTACAAGATGCTTGACACTGTGTCCTTCTTCCATCCAGGAT  
TGGGGAGTCAGAGGACTGTGCAGGAATCGTGTCTTCTGCTCTCCAGATGCCAGCTACGTCAACGGGGAGAA  
CATTGCGGTGGCAGGCTACTCCACTCGGCTCTGAGAGGAGTGGGGGCGGCTGCGTAGCTGTGGTCCCAGGCCAG  
GAGCCTGAGGGGGTGTCTAGGTGATCATTGGATCTGGAGGCAGAGTCTGCCATTCTGCCAGACTAGCAATTGG  
GGGCTTACTCATGCTAGGCTTGAGGAAGAAGAAAACGCTTCGGCATTCTCCTTAGGACTTATCTGCTTGTAGAT  
TTGGCTGATCCAATTAACATGTGGGGTTCTTGGTGTGGGTCTGGGGAGCTGAAGGATTTATGGAGCTGGTGTCTT  
TGGAGGAATCTTAAGGGAAAGGAGTAGAAGCTCAGGCCTTTGAAGGATTCAGCTCCTCCTCTCTGTAATTGTG  
CTTTAAGCATTTTTTTCCTAAAAATAAACTCAAATTTATCCTC

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**FIGURE 3967**

GGTTCCTTCCACGCTGTGGAAGCTTTGTTCTTTTGGTCTTCATGATAAAATCTTGCTGCTGCTCACTCGTTGGGT  
CCGTGCCACCTTTAAGAGCTGTAACACTCACCGCGAAGGTCTGCAACTTCACTCCTGGGGCCAGCAAGACCACGA  
ATGCACCGAGAGGAATGAACAACCTCTGGACACACCATCTTTAAGAACCGTAATACTCACCGCAAGGGTCTGCAAC  
TTCATTCTTGAAGTCAGTGAGGCCAAGAACCCATCAATTCCGTACACATTTTGGTGACTTTGAAGAGACTGTCAC  
CTATCACCAAGTGGTGAGACTATTGCCAAGCAGTGAGACTATTGCCAAGTGGTGAGACCATCACCAAGCGGTGAG  
ACTATCACCTATCGCCAAGTGGCCTGATTACAGCAGGAAGCATCTCAGACACCAACCACTATGCTGTCAGCAGTTG  
CCCGGGGCTACCAGGGCTGGTTTTATCCCTGTGCTAGGCTTTCTGTGAGGATGAGCAGCACCGGGATAGACAGGA  
AGGGCGTCCTGGCTAACCGGGTAGCCGTGGTCACGGGGTCCACAGTGGGATCGGCTTTGCCATCGCCCCGACGTC  
TGGCCCCGGGACGGGGCCACGTGGTCATCAGCAGCCGGAAGCAGCAGAACGTGGACCGGGCCATGGCCAAGCTGC  
AGGGGGAGGGGCTGAGTGTGGCGGGCATTGTGTGCCACGTGGGGAAGGCTGAGGACCGGGAGCAGCTGGTGGCCA  
AGGCCCTGGAGCACTGTGGGGGCGTCGACTTCCTGGTGTGCAGCGCAGGGGTCAACCCTCTGGTAGGGAGCACTC  
TGGGGACCAAGTGAGCAGATCTGGGACAAGATCCTAAGTGTGAACGTGAAGTCCCCAGCCCTGCTGCTGAGCCAGT  
TGCTGCCCTACATGGAGAACAGGAGGGGTGCTGTATCCTGGTCTCTTCCATTGCAGCTTATAATCCAGTAGTGG  
CGTGGGTGTCTACAATGTCAGCAAGACAGCGCTGCTGGGTCTCACTAGAACACTGGCATTGGAGCTGGCCCCCA  
AGGACATCCGGGTAAACTGCGTGGTTCCAGGAATTATCAAACTGACTTCAGCAAAGTGTTTCATGGGAATGAGT  
CTCTCTGGAAGAACCTCAAGGAACATCATCAGCTGCAGAGGATTGGGGAGTCAGAGGACTGTGCAGGAATCGTGT  
CCTTCCTGTGCTCTCCAGATGCCAGCTACGTCAACGGGGAGAACATTGCGGTGGCAGGCTACTCCACTCGGCTCT  
GAGAGGAGTGGGGGCGGCTGCGTAGCTGTGGTCCCAGGCCAGGAGCCTGAGGGGGTGTCTAGGTGATCATTGG  
ATCTGGAGGCAGAGTCTGCCATTCTGCCAGACTAGCAATTTGGGGGCTTACTCATGCTAGGCTTGAGGAAGAAGA  
AAAACGCTTCGGCATTCTCC

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**FIGURE 3968**

TCTTGTGCCCCGGGCGCGGTGGGGAGGCCGGGGAGGGGGCCCCGGGGGGCGCAGGGGACTACGGGAACGGCCTGGA  
GTCTGAGGAACTGGAGCCTGAGGAGCTGCTGCTGGAGCCCGAGCCGAGCCCGAGCCCGAAGAGGAGCCGCCCCG  
GCCCCGCGCCCCCGGGAGCTCCGGGGCCCTGGGCCTGGTTCTGGGAGCCCCCGGCAGCCAAGAGGAGGAGGAGGA  
GCCGGGACTGGTTCGAGGGTGACCCGGGGGACGGCGCCATTGAGGACCCGGTGAGGGAAGGAGGGCGAGCGAGCAG  
GCCGGCGGCTGGCCGGCCGGGTCACTGGAGGCCAGAGCTCGGGCGAGCGGGTGGCAGGCGGGGGGTGGGGTTGG  
GCGGGGAATAACGTGGCTGGGGCCGGGTGCGGGCCGGGGATGGGTGAGCGATCACTACAAGGGGGCCGACTGGCTT  
GATTCGGGCGTCACGGTTGCCCTAGTGTGTTCTAGAGAGGGTAGCTTTTCTTTTATCACGACCCTCGCATGGGGC  
GAGGGAAATGGCCGAGCATGGCTGAGGCCGCGCTCTGGCCGAGAGCAGGGCACAGCCCCTGCGTTGGTTCTCTT  
AAGCTGTCCTCCATACCCTCCCCACTTATATTAGGAGCTGGAAGCTATCAAAGCTCGAGTCAGGGAGATGGAGGA  
AGAAGCTGAGAAGCTAAAGGAGCTACAGAACGAGGTAGAGAAGCAGATGAATATGAGTCCACCTCCAGGCAATGC  
TGGCCCGGTGATCATGTCCATTGAGGAGAAGATGGAGGCTGATGCCCGTTCCATCTATGTTGGCAATGTGGACTA  
TGGTGCAACAGCAGAAGAGCTGGAAGCTCACTTTCATGGCTGTGGTTCAGTCAACCGTGTACCATACTGTGTGA  
CAAATTTAGTGGCCATCCCAAAGGGTTTGCGTATATAGAGTTCAGACAAAGAGTCAGTGAGGACTTCCTTGGC  
CTTAGATGAGTCCCTATTTAGAGGAAGGCAAATCAAGGTGATCCCAAACGAACCAACAGACCAGGCATCAGCAC  
AACAGACCGGGGTTTTCCACGAGCCCGCTACCGCGCCCGGACCACCAACTACAACAGCTCCCGCTCTCGATTCTA  
CAGTGGTTTTTAACAGCAGGCCCCGGGGTCGCGTCTACAGGTCAGGATAGATGGGCTGCTCCTCTTTCCCCCGCCT  
CCCGTG

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**FIGURE 3969A**

CACGCTCAGAGCAGACCGCTAGCAGGAGGCAGGATGTGATAGTCTAAGACCCTGGAAGCTGACGGCCAGAGGGAG  
GGAAGGGTGGTCACAGAGGAGAGGCAAAGCAACGGGAGGTGGAGGATCCTGGAGGTGTCTGCAAGGAGAATACAC  
AGCAGCGAGGGGGTGCAGAAGCGGACCCAGCGACTTCTGCGCTGACGCGGGGCGGGCGGGAGAGAGGAAGAGAGG  
GGAGCGCGGTGGCGCTGCGAGCTGGCCCCGCCGGGAAGGGGTGCCATGTCCCCGTGAGCGGCCCCCGGGCACC  
ACATTCCCCGCAACCTGAGCTTTCATCGCGCGCTAACGGAGCGCGCCTACTACCGTAGCCAGCGGCCAGCCTCG  
AGGAGGAGCCGGAGGAGGAGCCAGGCGAGGGCGGGACGCGGTTCGGGGCCCGATCCCGCGCTCACGCACCGAGTC  
GGGCGCGCGGGCCGATCTGCACCAGCGGAGGCGGGCGGGGCGGGCGCCCCGAGCCGTAGCCCCAGACACCC  
GCAAGAGAGTGCCTTCGCCGACGCACTGGGGTTGGAGCTGGCTGTCTGTCGCGCGCTTCCGTCCCGGTGAGCTGC  
CCCGGGTGCCCCGCCACGTGCAGATCCAATTGCAGAGGGACGCCCTCCGCCACTTCGCGCCCTGCCAGCCCCGCG  
CCCGCGGCCTCCAGGAGCGCGCGCCGCCCTGGAGCCGCCAGCGAGCCCGGCTTCGCGCCCGCTTGCTGACGC  
AGCGCATCTGCCTGGAACGCGCGCGAGGCGGGCCCGCTGGGCGTGGCCGGGAGCGCGCGCTGGTGACCTGGCCT  
ACGAGAAGCGCGTGAGCGTGCGCTGGAGCGCCGACGGCTGGCGGAGCCAACGCGAGGCGCCAGCCGCTACGCCG  
GTCCGGCCCCGCCCCGCCGCGCGCCGACCGCTTCGCCCTTCGCGCTGCCCGCGCGCGGATTGGGGGCGCCCTGC  
TCTTCGCCCTTGCGCTACCGTGTGACAGGTACAGATTCTGGGACAACAACGGCGGCCGTGACTATGCTCTACGTG  
GGCCCGAGCACCCGGGCGAGTGCGGAGCTCCGGAGCCGAGGGCTGGATCCACTTTATCTGAGACGAGGCGCCTG  
CGGCCGACGGCGGAAACACCAAAGGCACCCGGGGGCGGGGCGACCCGATGTGGCGGGGAGGAGTAGGAGAGACC  
AGGATTGGCGGGAGCGGTCCAAGGGAGTCAAGCCGGGAGGGCGAAAAGGGAACCTGGCCACTGCTCCTTGGTCC  
TTGGCATTATGACGGGATTCCCTTGTACCTCTGACAGTTCTGGCTGCGGTGTCCGCGGACTGGCTGGGGAGTG  
ATGACAGAAGGGATGGAACCCCTATTTTCTTTCTCCAAGACCATGGTTGGTCTGCTTCCCTCACTCGGGCTCCT  
TGACAGTCTTCTAGAAGAGAGAAGGAGGAAAAGAAGCAGTTCTGTATGTTACAAATGAACAAGGATCTCCCAGCC  
TTAGTCTTTGAGAAAAGATGGCTGAAAGAGAGGAACCTCTCCAAGTCATTCCGCAAACAAATGCCCATTTAAACAT  
CATCCTTGTCTTGTGAAGAAAACAGGAAGAATGTCTATGTACCATGTGGATCACCTTCAGTTCAAAGTTGCAGCAA  
AGTGAAGAAAGAACTACTGGAAGCCACCCAGCAATGCACTGTTTAGTCATCAATTAGGAGCCCATGGGAGGATA  
ATAGGGAGACTGGGTGGAGGCTCAGTGTGTAATAATCTCTGTCTAATGTATGTGTGCTCACTGCCATGTTGTATG  
AACAATAGTGAGGGCTCACATTTACTTAACTTGTGTGCGCAAACTCTGGGTTTTCTTCTTCCAGAACTATG  
ACTCGATCATAAAATCTGTTTTGTTTGCATGCATGCCAAAACAACCCCTGTAAGTAGAACATTGTCTATCTCT  
GTTTATAGATGAGGAAACAGGCTCAGAGAAGCTCAGAAATTTGTTCAAGATCGCACAGCTAGTAAATGGCAGAA  
GTAGGATTGTGAACCCAGGGAATCTCCAGAGCCTCTGTGTAACCATGATGTTATATTTTTTCTCTTTAAAAA  
CAAAATTTAAACCTTGCTATAATCTCTTATTAGGAAATGATCATAGTTTCTGACTGTGCTCTGCCTTCCCATCC  
TGCCATCTCCTGGACTGGCTTGGAGAAGACAGGGGGCCCCGAGCTTCATCTGTGACTCGAAGGAGTTTGCTGC  
TGTCTCCTGTGTCTAGTGTCCCATCTATGCAGGATCAGCACAGGACCCCCCTACCTTCCCACTTACACTCTAGCC  
TTTCCATACATTGGAATCTCTCCTGGCCCTAGCCAGCGCTCCACACCTGTTGGTGTGCCACCTCCCTCCCTCTT  
CCCCACTGGCCTTGAACAGGCAACCCCCCTAATGTGCGCACTAGGTTGGGTCCGTGACTAGGACACCTGCTAGA  
GGGTCTGTGCTTGGGCCTTTTCTAGGAATCCCGATGTTACTGGGTAAGTGCCAACTCTGTGGGCAGAAATGCTAAT  
GATAATCCTGTTCCCTGACCTCTTCTCAGAAGTACCCTGGCTCACTCTCCCAATCTCAGCTTTATAGAACAAC  
ATTTTGGTCTTGATTATCCCATATCAAGCTGCCCCAGGGCTTCGGTAAGCTGTTAGTTGCCCCACTGCCTCAAG  
GCTGGGTCTGGCTGAGCTACTTCTTAGGCACACAAATAGTGGGTGCTCCTTGGAACCTGACACAAAACATCAG  
TGCTACCAAGCCTTGTAATAATAGGGAGGAACTAATATTTCTTGAGTGGCTTCTGAGTGCCTGGTGCTTTCGCGG  
CTCTCTGGAGAGATTCTTGGCCCTGATGGCTTTGGTGTGTACTCCTCTCCAGGACTTCAGCACTGAGATTTTCC  
CAACCCCTGGCTTTTCTCACCTTGGGTTGAGTTGATCCGGCACTACCACAAACCCACCATCTGCAACCAAC  
CAAGATTAGGCAGTATGCCCTTCCGTCTTGCACTGCTCTTCCAAACTTCCATCTGTAATTTCTCACACCCCTCAG  
TAAGCAAAGCTGAGTGTGCATGGACAGAGCTGCATCCACTGCTTTCTCCAGCGGGTGCAGTCTAATCTGACACG  
GGGAACACTAGGAGTTTAGCGGAATCTTCAGCCACCTATTAATGTGTTACGCATTAGGCATTGTAGTGGAACCT  
CCTCTGATGGCTCATGACTATATGAACAGGAGCAATTTGGAATATAACATGTGAGTGTGGACTGGGAAGTGCCG  
TGAGAGAAAACACTACCTGGGTGATAGGCTTGGGTCCCTGAGGCAACCCAGCAGGGACACTGTTGCCCATTCCTC  
TCATCCAGACTGCAGGTGTCTTCTACACCTCCCTGTCCCATAGCCTCCGTCTGTTTTTGTGTTGTTTTT  
CTTTGTGAATGTAGAAAAACATTCATCATGAGCCCTAGCTCCTCAGTTTTCCACCTAACACCCACATTCCCTTG  
TTTCTAACTGCCGTGTTTTTCTGGAGCCTGCTGGGATCTTTGCAGTTTGACAGTTCATAGAATCAGACATGAAAAG

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**FIGURE 3969B**

GCTTCTCTTCCGACGTCATTGGTTCCTGGCTCCTTTACAGATGAGAACACAGGTCCAGAGGTGAGAAATGACTCT  
AGCAGGGTCATAGAATTTGTTAGTGCAGCTCAAGATGGGACTTAACTCAGGCCTCCTGATCACCATTCCCAGG  
CTAGGAAACAGGTCTCTGCTCGGTGTGGTGGTTTCATACCTGTAATCGCAACACTTTGGGAGGCTGAGGCAGGAGC  
ATTGCTTGAGCCCAGGAGTTCGAGACCAGTCTGAGCAACATAGTGGGACCCTGTCTCTACAAAACTTTTAAAT  
TAGCTGGGCATGGTGGCACACATCTGTATTCCCAGCTACTCAGGAAGCTGAGACAGGAGGATCGCTTGAGCCCAG  
GAGTTGGAGGTTACTGAGCTATGATCGCACCACTGCACTCCAGCTTGGTGACAGTGAGACCCTCAAAAAAAAAA  
GAAAAGAAAGAGGTCTCTACACAAGCCCGTGATTCTTCATGGCAAGGGATAACATCAGAAATGTTTCATTTTCTG  
CTATTAGTTTCCATTCCCTTTCCCCATCCAGGCATAAAGAGAAACAAAAGACAATGATGGTATTCTCTGTGTCCTC  
AGCTTTGGCACTTTTGTGATGTTGCTAAGGAGCAGTGACCTTGCTAAAAAGACTGAATAATCCACCCACTGAAT  
AGCTAACCTGGGGAGGAAATGAAAATTTCCCTTTGTGGATCTCCCCAAATCCATTGTTGTCACCAGGCCCTCCCAG  
AACCTCCTCAGTTCCTTCACAGTGCAACCCTGTGTACTTGGCCCGCAACCCAATAGTATTGTGCCTCACTTCACC  
TTCCATGGGCAACTGCCCTCCCTTCTGGACATAAAACCTCATATTTTAAATAAAGTTGAAATATGAAAAG

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**FIGURE 3970**

MSRERPPGTDIPRNLSFIAALTERAYYRSQRPSLEEEPEEEPEGEGGTRFGARSRAHAPSRGRRARSAPAGGGGAR  
APRSRSPDTRKRVRFADALGLELAVVRRFRPGELPRVPRHVQIQQLQRDALRHFAPCQPRARGLQEARAALPASE  
PGFAARLLTQRICLERAEAGPLGVAGSARVVDLAYEKRVSVRWSADGWRSQREAPAAYAGPAPPPPRADRFARL  
PAPPIGGALLFALRYRVITGHEFWDNNGGRDYALRGPEHPGSGGAPEPQGWIHF I

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**FIGURE 3971**

GGCTCCTTCCCCTTCCCGGGCCTTTCAGCTTGGTCTTTCCGGGCCTCGCTTCCCCAGCCCCTGCGCCCGGCCCG  
AACGAGAGGTTCCGGAGCCCCGGCGCGGGCGGGTTCCTGGGGTGTAGACGCTGCTGGCCAGCCCTCCCCAGCCGAG  
GTTCTCGGCACCGCCTTGAGAGCTTCAGCTGCCCCAGGATTAGAATCCCAAGAAAATCAAATGGCATCCGGGGAT  
TTCTGCTCACCTGGAGAAGGGATGGAATACTTCAACAAGTGTGCAGCAAACTTCCTCCTTGTAACCTGAGT  
AAAGAGGACCTGTTACAGAACCCATACTTCAGCAAGCTTCTCCTGAATCTCTCACAGCATGTGGATGAGAGTGGC  
TTAAGCCTCACCTTAGCAAAGGAGCAGGCTCAGGCATGGAAGGAAGTTCGACTGCATAAGACAACATGGTTGAGG  
TCTGAGATTTTACACAGAGTCATTCAAGAGTTGCTTGTGGACTACTATGTGAAGATACAAGACACAAATGTAAC  
TCTGAGGACAAAAAGTTTCATGAGACCTTGAACAGCGGCTGCTTGTAACTGAACTGATGCGGCTCTTAGGTCCT  
AGCCAGGAGAGGGAGATACCTCCACTGCTGGGGCTGGAGAAAGCGGACCTTCTGGAACATGCCACTCACAGAG  
GATTTTGTGTGGATGAGGGCTCGGCTACAGCAAGAAGTAGAGGAGCAGCTCAAAAAGAAATGTTTCACTCTGCTC  
TGCTACTATGATCCCAATTCAGATGCTGACAGTGAAACCGTGAAGGCAGCAAAGGTGTGGAACTCGCAGAGGTC  
CTGGTGGGTGAGCAGCAGCAGTGCCAGGATGCCAAGAGCCAGCAGAAGGAGCAGATGTTGCTGCTGGAGAAGAAG  
AGTGCTGCTTACTCCCAGGTGCTTCTCCGCTGCCTCACTTTGCTGCAGAGGCTTCTTCAAGAACACCGGCTGAAG  
ACTCAATCCGAGCTAGACCGCATCAATGCCAGTACCTGGAAGTCAAGTGCGGTGCTATGATCCTTAAGCTGAGG  
ATGGAGGAGCTAAAGATTTTGTCCGACACTTACACTGTTGAGAAAGTGGAAGTTTCATCGTCTGATTAGGGACCGT  
TTGGAGGGAGCCATTACCTACAGGAGCAGGACATGGAGAACTCAAGACAGGTCTGAACTCCTATGAGGTCCTT  
GGGGAGGAGTTTGACAGGCTGGTGAAAGAGTACACCGTACTCAAGCAGGCAACAGAGAACAAGCGGTGGGCCCTC  
CAGGAGTTCAGCAAGGTCTACCGTTGAGCTCTGGCAGGGCCAGGAGACATGGCTTCTGCATAGCTGCTGCCTCCT  
AATCTTCTGCTAGTGGGACCACCTTCACCTGGGGCTGCCTTCAGTGCAAGGGAGTGTGGAAATGCTTACGCTTG  
AAACACTGCAGTCATTTAGGCACTCTCCTGGTTTCTCTTTATTTTTATGACTGGGCCTCTTCTGGAAAATCTAG  
CAAGGAGATTTATATAATTTTTATGCATAGCTGTGTGTCAGTGTGAGCCCTGTATTGTATTGATTATCTCCTGA  
ATAAAGTTATGATATTATATCTTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3972**

MASGDFCSPGEGMEILQQVCSKQLPPCNLSKEDLLQNPYFSKLLLNLSQHVDSEGLSLTLAKEQAQAWKEVRLHK  
TTWLRSEILHRVIEQLLDYVYVKIQDTNVTSEDKKFHETLEQRLLVTELMRLLGPSQEREIPPLLGLEKADLLEL  
MPLTEDFVWMRARLQQEVEEQKKKCF'TLLCYDPNSDADSETVKAQVWKLAEVLVGEQQQCQDAKSQQKEQML  
LLEKKSAAYSQVLLRCLTLLQRLLQEHRLKTQSELDRIQAQYLEVKCGAMILKLRMEELKILSDTYTVEKVEVHR  
LIRDRLEGAIHLQE QDMENSRQVLNSYEVLGEEFDRLVKEYTVLKQATENKRWALQEF SKVYR



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**FIGURE 3973**

CGGACTCGTCCCGCCTTCTGGGGCACTAGTTTGACTTTGTGATTGGCTACTAGTATCAAGGAATCCCGGCGTGGA  
CAGCGCGAGGAGAAAGATGGCGCGATGGCGGTTCGGGGGTGCTGGTGGGAGCCGCGTGTCCAGCGGGAGGGACCT  
GAATTGCGTCCCCGAAATAGCTGACACACTAGGGGCTGTGGCCAAGCAGGGGTTTGATTTCTCTGTCATGCCTGT  
CTTCCATCCGCGTTTCAAGAGGGAGTTTCATTAGGAACCTGCTAAGAATCGGCCCGGTCCCCAGACACGATCAGA  
CCTACTGCTGTCAGGAAGGGACTGGAATACGCTAATTGTGGGAAAGCTTTCTCCATGGATTTCGTCCAGACTCAAA  
AGTGGAGAAGATTGCGAGGAACCTCCGAGGCGGCCATGTTACAGGAGCTGAATTTTGGTGCATATTGGGTCTTCC  
AGCTTTCTGCTGCCCCCTTAATCAGGAAGATAACACCAACCTGGCCAGAGTTTTGACCAACCACATCCCACTGG  
CCATCACTCTTCCATGTTCTGGATGCGGGTACCCTTGGTGGCACCAGAGGACCTGAGAGATGATATAATTGAGAA  
TGCACCAACTACACACACAGAGGAGTACAGTGGGGAGGAGAAAACGTGGATGTGGTGGCACAACCTCCGGACTTT  
GTGTGACTATAGTAAGAGGATTGCACTGGCTCTTGAAATTGGGGCTGACCTCCCATCTAATCATGTCAATTGATCG  
CTGGCTTGGGGAGCCCATCAAAGCAGCCATTCTCCCCACTAGCATTCTCTGACCAATAAGAAGGGATTCTCTGT  
TCTTTCTAAGATGCACCAGAGGCTCATCTTCCGGCTCCTCAAGTTGGAGGTGCAGTTCATCATCAGGCACCAA  
CCACCACTCAGAGAAGGAGTTCTGCTCCTACCTCCAATACCTGGAATACTTAAGCCAGAACCGTCTCTCCACCTAA  
TGCCTATGAATCTTTGCCAAGGGCTATGAAGACTATCTGCAGTCCCCGCTTCAGCCACTGATGGACAATCTGGA  
ATCTCAGACATATGAAGTGTGTTGAAAAGGACCCCATCAAATACTCTCAGTACCAGCAGGCCATCTATAAATGTCT  
GCTAGACCGAGTACCAGAAGAGGAGAAGGATACCAATGTCCAGGTACTGATGGTGTGGGAGCAGGACGGGGACC  
CCTGGTGAACGCTTCCCTGCGGGCAGCCAAGCAGGCCGACCGCGGATAAAGCTGTATGCTGTGGAGAAAAACCC  
AAATGCCGIGGTGACGCTAGAGAACTGGCAGTTTGAAGAATGGGGAAGCCAAGTGACCGTAGTCTCATCAGACAT  
GAGGGAATGGGTGGCTCCAGAGAAAGCAGACATCATTGTGAGTGTGAGCTTCTGGGCTCATTGCTGACAATGAATT  
GTCGCTGAGTGCCTGGATGGAGCCAGCACTTCTAAAAGATGATGGTGTGAGCATCCCCGGGGAGTACACTTC  
CTTTCTGGCTCCCATCTCTTCTCCAAGCTGTACAATGAGGTCCGAGCCTGTAGGGAGAAGGACCGTGACCTGA  
GGCCAGTTTGAGATGCCTTATGTGGTACGGCTGCACAACCTCCACCAGCTCTCTGCACCCAGCCCTGTTTCAC  
CTTCAGCCATCCCAACAGAGATCCTATGATTGACAACAACCGCTATTGCACCTTGGAATTCCTGTGGAGGTGAA  
CACAGTACTACATGGCTTTGCCGGCTACTTTGAGACTGTGCTTTATCAGGACATCACTCTGAGTATCCGTCCAGA  
GACTCACTCTCCTGGGATGTTCTCATGGTTTCCCATCCTCTTCCCTATTAAGCAGCCCATAACGGTACGTGAAGG  
CCAAACCATCTGTGTGCGTTTCTGGCGATGCAGCAATTCCAAGAAGGTGTGGTATGAGTGGGCTGTGACAGCACC  
AGTCTGTTCTGCTATTATATAACCCACAGGCCGCTCATATACCATTGGCCTCTAGCCCTGCGTGCCAAGTGTCCA  
GAGCCTTGGAAGCAGCTTCAGGTTCTGCTCCTGTAGTACAGAAGGTGCAGTACATCTATGGGCTGTGATTCCCC  
CTTGCCCATCAGAGAGGAGCATTTCATCTGCTTTCTGCTTACATCAAGGTGGGCAAGGGATTATAATTAATT  
GCAGGGCTCAAGCCACCAATCTATGAAGACCTCAGGCCAGGGGTGAGGAATTAGTGCTGGATTGTAAGCTACGC  
ACTCAGCCTCAAGAACTCCCTGGAATATCCCTGAGAACATGGGGTTTGAACGGATTTTCAGCCTTTTTCTGTTCT  
TGTTTTGATGGTTTTGTGTAAGAGGAAATACCAATAAAGTTATAGCCCTTTACTGCCAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAA

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**FIGURE 3974**

MAAMAVGGAGGSRVSSGRDLNCPVEIADTLGAVAKQGDFLCMPVFHPRFKREFIQEPAKNRPGPQTRSDLLLSG  
RDWNTLIVGKLSPIRDPDSKVEKIRRNSEAAMLQELNFGAYLGLPAFLLPLNQEDNTNLARVLTNHIHTGHHSSM  
FWMRVPLVAPEDLRDDIENAPTTHTEEYSGEEKTWMWWHNFRTLCDYSKRIAVALEIGADLPSNHVIDRWLGEP  
IKAAILPTSIFLTNKKGFPVLSKMHQRLIFRLLKLEVQFIITGTNHHSEKEFCSYLQYLEYLSQNRPPPNAVAYELF  
AKGYEDYLQSPLQPLMDNLESQTYEVFEKDPKYSQYQQAIYKCLLDREVPEEEKDINVQVLMVLGAGRGPLVNAS  
LRAAKQADRRIKLYAVEKNPNAVVTLENWQFEWGSQVTVVSSDMREWVAPEKADIIVSELLGSFADNELSPECL  
DGAQHFLKDDGVSIPGEYTSFLAPISSSKLYNEVRACREKDRDPEAQFEMPYVVRHLNHFHQLSAPQPCFTTFSHPN  
RDP MIDNNRYCTLEFPVEVNTVLHGFAGYFETVLYQDITLSIRPETHSPGMFSWFPILFPKQPI TVREGQTICV  
RFRWCSNSKKVWYEWAVTAPVCSAIHNPTGRSYTIGL

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**FIGURE 3975**

GGTTCTGGAAGACGGCAGAGCTGCCGCCATTTTGCGGGAAGAGGAGGCTCTGTACCTGCAGTGCTGCTTTTCTTG  
CCTAGACTCTAGGAAGTATCCGAGCTCCACTCCCCACAACATACTCAAAGGAACGGAGAGAACCGGGACCCCCCT  
GCGGGGACCCGGAAGTATCTGACAGGATGGCATCTGATGACTTTGACATAGTGATTGAGGCCATGCTGGAAGCT  
CCCTATAAAAAAGAGAGGATGAGCAACAAAGGAAAGATTAAAAAGGATTATCCTAGCAATACCACCAGCAGC  
ACCAGCAACAGTGGAATGAGACCAGTGAAGCAGCACCATCGGGGAGACAAGCAATCGTAGTCGAGATCGGGAT  
CGGTATAGACGGAGAAATAGTCGGAGCCGAAGTCCAGGTCGGCAGTGTCTGTCACCGTAGCCGTAGCTGGGATCGT  
CGACATGGTAGTGAGTCGCGAAGTCGGGACCATCGTCGTGAGGATCGTGTGCATTACAGGAGTCCCTCCACTTGCC  
ACTGGTTATAGGTATGGACACAGTAAGAGTCTCTATTTCAGAGAGAAGAGCCAGTCAGGGAGCCAGTTGATAAT  
CTGAGTCCTGAGGAGCGTGATGCCCGCACAGTTTTCTGTATGCAGTTAGCTGCCCGAATTCGGCCTCGAGATCTG  
GAGGACTTTTTCTCTGCTGTAGGCAAGGTTTCGCGATGTACGTATCATCTCAGATCGGAACCTCACGTGCTTCTAAG  
GGCATTGCCTACGTGGAATTCTGTGAAATCCAGTCTGTGCCACTGGCCATTGGGCTGACTGGGCAGCGGTTGCTG  
GGAGTGCCTATCATTGTACAGGCTTCACAGGCAGAGAAAAACCGACTGGCAGCCATGGCCAACAACCTGCAAAAG  
GGCAATGGTGGACCAATGCGCCTCTATGTGGGTTCCCTGCACCTTCAATATCACTGAAGACATGCTCCGGGGCATC  
TTTGAGCCCTTTGTGAAAATTGATAATATTGTCTGTATGAAGGACTCAGATACAGGCCGCTCTAAAGGTTATGGT  
TTATCACGTTCTCTGATTCTGAGTGTGCCCGGGGGCCCTGGAACAGTTGAATGGGTTTGAGCTTGCTGGTCTGA  
CCTATGAGGGTTGGCCATGTGACTGAGCGACTGGATGGTGGCACAGACATCACTTTTCTGATGGGGACCAGGAG  
CTGGATCTGGGATCAGCAGGTGGACGTTTTTCAGCTCATGGCAAACTGGCAGAAGGCGCTGGAATCCAACCTGCCA  
AGCACTGCTGCTGCTGCTGCTGCCGCCGCCGCCAGGCTGCTGCCTTGCAACTGAATGGAGCAGTTCCCTTGGGG  
GCCCTGAATCCAGCAGCTCTGACTGCTCTGAGTCCAGCCCTGAACCTTGCCCTCCCACTGTTTCCAGCTCTCCAGC  
CTCTTTACCCCCCAGACCATGTAAATCAGTGGCACAGTATACTGCCTCCTTGTCCTCTGGATCCTGCCACTTCA  
CATCTACTCTTCCATGGCCCCATTTCTCCATTTTGTGGACCAAGCCATCCTGAGGGCATGGACATTGTCTCTGAG  
GAAATTGGGGCCACCCTTAAGATACCAAGAAAAGCTCCTGCCCATGGTCCCACTGGAATGGACTCTGCTGAGCA  
AAGCCACCAGTTGAAGAGAACAGAAATCCACACCTGCATTGAATACCTGTTTCTCCATGTGTATCGTCTCTGAGAT  
TACCTTCTTGCCCTTTCCAACACCTTAGTGATTCTCAATTTCTCCCCATTGGGAAGGCCATAGGGCATACTGA  
AGGAACTGACCTCTCTCCTTTTCTGTACCTTTAACCTTTAGTCTGTCAAGGAAAACCTTAGGACCTCTGAATC  
AAGAGGACTGAGTTTGTGGGTGAACCTTGAAGGTGCTCTTCTGCTACAAGGGCCCTGGGAGATAGCATGGACGT  
GCATTGAGAAGCCAGCCTCAGACCTTAGCTTGAAGCAGCTTGAGGCCAGACCTACTGTAGCCTCAGCATCTTGCT  
AGGAGGCATGGAAGTGATCTATCCTGCCAGGAGGCCTCAGAGTGATCTGTCTGCCAGGAGGTGTGAGAGTGATC  
TGCTCTGTGAGGCATTTAGGGGCTTTCAGGAATTTAGTAAAAGGTGGAGTATGCCTTTCCAGTATCTTCCATCTT  
CCTTTGTATACTTGTCTTCTCTCCATTTCTCCCTTTGGCCCCGAGGTAGGAGGATGGAGGGAGGCTGCTACTCT  
ACCACTTCTGTGTGCTCTACTGTGGCCTCAACCTGGCAATTATAGCTACTCCCATCCCTTACCTGGGCATGT  
GTGAGCCCTTCTCACTGGATTTTATACCCTTGTGTCTGTGTACATAAATATATATACATATATATACATAAAA  
ACTTTGTAC

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## FIGURE 3976

CAGACCCAGTTCGCCGACTAAGCAGAAGAAAGATCAAAAACCGGAAAAGAGGAGAAGAGCAAACAGGCACCTTTG  
AGGAACAATCCCTTTAACTCCAAGCCGACAGCGGTCTAGGAATTCAAGTTCAGTGCCTACCGAAGACAAAGGCG  
CCCCAGGGAGTGGCGGTGCGACCCAGGGCGTGGGCCCGGCGGAGCCACACTGCCCGGCTGACCCGGTGG  
TCTCGGACCAATGTTCTCCCGCCCCAAGACCCCCCGTTGTCTCCTGCTCCCCCTGCTCACGCTCGGCACCGCGCTC  
GCCTCCCTCGGCTCGGCCCAAAGCAGCAGCTTCAGCCCCGAAGCCTGGCTACAGCAATATGGCTACCTGCCTCCC  
GGGACCTACGTACCCACACACAGCGCTCACCCAGTCACTCTCAGCGGCCATCGCTGCCATGCAGAAGTTTAC  
GGCTTGCAAGTAACAGGCAAAGCTGATGCAGACACCATGAAGGCCATGAGGCGCCCCCGATGTGGTGTTCAGAC  
AAGTTTGGGGCTGAGATCAAGGCCAATGTTTGAAGGAAGCGCTACGCCATCCAGGGTCTCAAATGGCAACATAAT  
GAAATCACTTTTGCATCCAGAATTACACCCCCAAGGTGGGCGAGTATGCCACATACGAGGCCATTTCGAAGGCG  
TTCCGCGTGTGGGAGAGTGCCACACCACTGCGCTTCCGCGAGGTGCCCTATGCCTACATCCGTGAGGGCCATGAG  
AAGCAGGCCGACATCATGATCTTCTTTGCCGAGGGCTTCATGGCGACAGCACGCCCCTTCGATGGTGAGGGCGGC  
TTCTGGCCCCATGCCTACTTCCCAGGCCCAACATTGGAGGAGACACCCACTTTGACTCTGCCGAGCCTTGGACT  
GTCAGGAATGAGGATCTGAATGGAATGACATCTTCTGGTGGCTGTGCACGAGCTGGGCCATGCCCTGGGGCTC  
GAGCATTCCAGTGACCCCTCGGCCATCATGGCACCCCTTTTACCAGTGGATGGACACGGAGAATTTTGTGCTGCCC  
GATGATGACCGCCGGGGCATCCAGCAACTTTATGGGGGTGAGTCAGGGTTCCCCACCAAGATGCCCCCTCAACCC  
AGGACTACCTCCCGCCCTTCTGTTCTGATAAACCCAAAAACCCACCTATGGGCCCAACATCTGTGACGGGAAC  
TTTGACACCGTGGCCATGCTCCGAGGGGAGATGTTTGTCTTCAAGGAGCGCTGGTCTGGCGGGTGAGGAATAAC  
CAAGTGATGGATGGATACCCAATGCCCATTTGGCCAGTTCTGGCGGGGCGCTGCCTGCGTCCATCAACACTGCCTAC  
GAGAGGAAGGATGGCAAATTCGTCTTCTTCAAAGGAGACAAGCATTGGGTGTTTATGAGGCGTCCCTGGAACCT  
GGCTACCCCAAGCACATTAAGGAGCTGGGCCGAGGGCTGCCTACCGACAAGATTGATGCTGCTCTCTTCTGGATG  
CCCAATGGAAGACCTACTTCTTCCGTGGAAACAAGTACTACCGTTTCAACGAAGAGCTCAGGGCAGTGGATAGC  
GAGTACCCCAAGAACATCAAAGTCTGGGAAGGGATCCCTGAGTCTCCAGAGGGTCATTATGGGCAGCGATGAA  
GTCTTCACTTACTTCTACAAGGGGAACAAATACIGGAAATTAACAACCAGAAGCTGAAGGTAGAACCGGGCTAC  
CCCAAGTCAGCCCTGAGGGACTGGATGGGCTGCCATCGGGAGGCGCGCGGATGAGGGGACTGAGGAGGAGACG  
GAGGTGATCATATTGAGGTGGACGAGGAGGGCGGCGGGCGGTGAGCGCGGCTGCCGTGGTGCTGCCCGTGCTG  
CTGCTGCTCCTGGTGCTGGCGGTGGGCCTTGCACTCTTCTTCTCAGACGCCATGGGACCCCCAGGCGACTGCTC  
TACTGCCAGCGTTCCCTGCTGGACAAGGTCTTCAGCGCCACCGCGCGCCCGCCCACTCCTACCACAAGGACTTTGC  
CTCTGAAGGCCAGTGGCAGCAGGTGGTGGTGGGTGGGCTGCTCCCATCGTCCCGAGCCCCCTCCCCGACGCTCC  
TTGCTTCTCTGCTGCCCTGGCTGGCCTCCTTACCCTGACCGCTCCCTCCCTCCTGCCCCGGCATTGCATCTT  
CCCTAGATAGGTCCCTGAGGGCTGAGTGGGAGGGCGGCCCTTTCCAGCCTCTGCCCCCAGGGGAACCTGTAG  
CTTTGTGCTGTGCCAGCCCCATCTGAATGTGTTGGGGCTCTGCACTTGAAGGCAGGACCCTCAGACCTCGCTGG  
TAAAGGTCAAATGGGGTCATCTGCTCCTTTCCATCCCTGACATACCTTAACCTCTGAACCTGACCTCAGGAG  
GCTCTGGGCACTCCAGCCCTGAAAGCCCCAGGTGTACCAATTGGCAGCCTCTCACTACTCTTCTGGCTAAAAG  
GAATCTAATCTTGTGAGGGTAGAGACCTGAGACAGTGTGAGGGGTGGGGACTGCCAAGCCACCCTAAGACCT  
TGGGAGGAAAACTCAGAGAGGGTCTTCGTTGCTCAGTCAGTCAAGTTCTCGGAGATCTGCCTCTGCCTCACCTA  
CCCCAGGGAACCTCCAAGGAAGGAGCCTGAGCCACTGGGGACTAAGTGGGCAGAAGAAACCTTGGCAGCCCTGT  
GCCTCTCGAATGTTAGCCTTGGATGGGGCTTTCAGATTAGAAGAGCTGAAACCAGGGGTGCAGCTGTCAAGTAG  
GGTGGGGCCGTGGGAGAGGCCCGGGTCAGAGCCTGGGGGTGAGCCTGAAGGCCACAGAGAAAGAACCTTGCCC  
AACTCAGGCAGCTGGGGCTGAGGCCCAAAGGCAGAACAGCCAGAGGGGGCAGGAGGGGACCAAAAAGGAAAATG  
AGGACGTGCAGCAGCATTGGAAGGCTGGGGCCGGGCAGGCCAGGCCAAGCCAAGCAGGGGGCCACAGGGTGGGCT  
GTGGAGCTCTCAGGAAGGGCCCTGAGGAAGGCACACTTGCTCCTGTTGGTCCCTGCTCCTTGCTGCCAGGCAGCG  
TGGAGGGGAAGGGTAGGGCAGCCAGAGAAAGGAGCAGAGAAGGCACACAAACGAGGAATGAGGGGCTTACAGAGA  
GGCCACAGGGCCTGGCTGGCCACGCTGTCCCGGCTGCTACCATCTCAGTGAGGGGCAGGAGCTGGGGCTCGCT  
TAGGCTGGGTCCACGCTTCCCTGGTGCCAGCACCCTCAAGCCTGTCTCACCAGTGGCCTGCCCTCTCGCTCCCC  
CACCAGCCCACCATTGAAGTCTCCTTGGGCCACCAAGGTGGTGGCCATGGTACCGGGGACTTGGGAGAGTGA  
GACCCAGTGGAGGGAGCAAGAGGAGAGGGATGTGCGGGGGGTGGGGCACGGGGTAGGGGAAATGGGGTGAACGGT  
GCTGGCAGTTCGGCTAGATTTCTGTCTTGTGTTTTTTGTTTTGTTTAAATGTATATTTTTATTATAATTATTA  
TATATGAATTCCAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3977**

MSPAPRPPRCLLLPLLTLTGALASLGSAQSSSFSPPEAWLQQYGYLPPGDLRTHRTQSPQSLSAATAAMQKFYGLQ  
VTGKADADTMKAMRRPRCGVPDKFGAEIKANVRRKRYAIOGLKWQHNEITFCIQNYTPKVGEYATYEAIRKAFRV  
WESATPLRFREVPYAYIREGHEKQADIMIFFAEGFHGDDSTPFDGEGGFLAHAYFPGPNIGGDTHFDSAEPWTVRN  
EDLNGNDIFLVAVHELGHALGLEHSSDPSAIMAPFYQWMDTENFVLPDDDRRGIQQLYGGESGFPTKMPPQPRTT  
SRPSVPDKPKNPTYGPNICDGNFDTVAMLRGEMFVFKERWFWVRNNOVMGYPMPIGQFWRGLPASINTAYERK  
DGKFVFFKGDKHWVFDEASLEPGYPKHIKELGRGLPTDKIDAALFWMPNGKTYFFRGNKYYRFNEELRAVDSEYP  
KNIKVWEGIPESPRGSFMGSDEVFTYFYKGNKYWKFNQKLKVEPGYPKSALRDWMGCPSSGGRPDGTEETEVI  
IIEVDEEGGGAVSAAAVLPVLLLLLVAVGLAVFFFRRHGTPRRLLYCQRSLLDKV

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**FIGURE 3978**

TCCTGCTCAGCATGGCTGCTTTAGGGACTGTTCTCTTCACAGGTGTCCGGAGGCTGCACTGCAGCGTAGCCGCTT  
GGGCGGGCGGCCAGTGGCGACTACAGCAGGGACTGGCTGCCAACCCCTCCGGCTACGGGCCCTTACCGAGCTCC  
CAGACTGGTCATATGCGGATGGCCGCCCTGCTCCCCAATGAAAGGCCAGCTTCGAAGAAAAGCTGAAAGGGAGA  
CGTTTGCAAGACGAGTTGTACTGCTGTACAGGAAATGGACGCTGGATTACAAGCATGGCAGCTCAGGCAGCAGA  
AGTTGCAGGAAGAACAAGGAAGCAGGAAAATGCTCTTAAACCCAAAGGGGCTTCACTGAAGAGCCCACTTCCAA  
GTCAATTAAAAAGCAACTCCTGCCTCCCTTCCTCACCCGTCTCTGGATTCTTTTCTATCACCTAGATGCTTCAT  
CCAGCCAGAAGATAGCCTTCACGTTCCCATCTGTCTTCAGAGAAAAGAGCTGGGACACCAAGAACAAGCTGTT  
AGATCACTGCCTGGGAGGCTTGGCTTAGTACTCTCATCTCTGGTTCCATTCCAGTTCAGCTAAGTCTTGCTTTAA  
AATTTTACCTCCTAGCTGGGTGCGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGCAGAT  
CACAAGATCAGGAGTTCGAGACCAGCCTGGCCAACCCAGCCTGGTCAACATGGTGAAACCTGTCCCTACTAAAG  
ATACAAACAATTAGCCGGGCGTGGTGGGTGCGCTTGTAAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCG  
CTTAAACTCGGGAGGTAGAGGTTGCAGTGAGCCAAGGTACACCATTGCACTCCAACCTGGGCGACAGGGCGAGA  
CTCCGTCTCAAAAAAAAAAAAAAATTACCTCCTTTGCAGGCCATAGGACTAGCCCAACTATGAGAAATAGCTGT  
TCTGTGAACGTGAAAAGGGGACAGCAGTTTTCCAGTTTTGGCCAGGCAGTCAAGCCTTTAACAGCTCATGCACA  
GTTTAGGCCATGTACAGCTGGCATCTAATAAATGTTTTTCATGAAAAAGA

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**FIGURE 3979**

MAALGTVLFTGVRRHCSVAAWAGGQWRLQQGLAANPSGYGFLTELPDWSYADGREAPPMKGQLRRKAERETFAR  
RVVLLSQEMDAGLQAWQLRQQKLQEEQRKQENALKPKGASLKSPLPSQ

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**FIGURE 3980**

AGCTGTTGCAGCATGAGCGATACGCTTGGTTCTCCTAACTAGCACCTTCCCCCTCTCCCCTGACTCAGCTGGTAGC  
CCCTCCTCCCCGACCTGCCCCAAAGGTCAGTGGACAGGCATTTGTCTGGCCTTCCCTTTTACTGCTGGCTGGGAA  
GGAGGAGCATCAGACCACAGATCCTGGAAGGCACCTTCTCTCCCTGACTGCTGCTCAGCTGCCGTGAGAACCTGC  
TTATATCCAGGACCAAGGAGGCAATGCCAGGAAGCTGGTGAAGGGTTTCTCTCCTCCACCATGGTTGACAGCAC  
TGAGTATGAAGTGGCCTCCAGCCTGAGGTGGAACCTCCCCCTTTGGGTGATGGGGCCAGCCCAGGGCCGGAGCA  
GGTGAAGCTGAAGAAGGAGATCTCACTGCTTAACGGCGTGTGCCTGATTGTGGGGAACATGATCGGCTCGGGCAT  
CTTTGTTTCCCCCAAGGGTGTGCTCATATACAGTGCCTCCTTTGGTCTCTCTCTGGTCACTCGGGCTGTCTGGGGG  
CCTCTTCTCCGTCTTTGGGGCCCTTTGTTATGCGGAAGTGGGCACCACCATTAAAGAAATCTGGGGCCAGCTATGC  
CTATATCCTGGAGGCCTTTGGAGGATTCCTTGCTTTTCATCAGACTCTGGACCTCCCTGCTCATCATTGAGCCAC  
CAGCCAGGCCATCATTGCCATCACCTTTGCCAACTACATGGTACAGCCTCTCTTCCCGAGCTGCTTCGCCCTTA  
TGCTGCCAGCCGCTGCTGGCTGCTGCTGCATTTGTCTCTTAACCTTCATTAACTGTGCCTATGTCAAATGGGG  
AACCTTGGTACAAGATATTTTACCTATGCTAAAGTATTTGGCACTGATCGCGGTTCATCGTTGCAGGCATTGTTAG  
ACTTGGCCAGGGAGCCTCTACTCATTTTGAGAATTCCTTTGAGGGTTCATCATTTGCAGTGGGTGACATTGCCCT  
GGCACTGTACTCAGCTCTGTTCTCTACTCAGGCTGGGACACCCTCAACTATGTCACTGAAGAGATCAAGAATCC  
TGAGAGGAACCTGCCCTCTCCATTGGCATCTCCATGCCATTGTACCATCATCTATATCTTGACCAATGTGGC  
CTATTATACTGTGCTAGACATGAGAGACATCTTGGCCAGTGATGCGTTGCTGTGACTTTTGCAGATCAGATATT  
TGGAATATTTAACTGGATAATTCCACTGTCAAGTTGCATTATCCTGTTTGGTGGCCTCAATGCCTCCATTGTGGC  
TGCTTCTAGGCCTTTCTTTGTGGGCTCAAGAGAAGGCCATCTCCCTGATGCCATCTGCATGATCCATGTTGAGCG  
GTTACACACAGTGCCCTTCTCTGCTCTCAATGGTATCATGGCATTGATCTACTTGTGCGTGGAAGACATCTTCCA  
GCTCATTAACTACTACAGCTTCAGCTACTGGTTCTTTGTGGGGCTTTCTATTGTGGGTGAGCTTTATCTGCGCTG  
GAAGGAGCCTGATCGACCTCGTCCCCCAAGCTCAGCGTTTTCTTCCCGATTGTCTTCTGCCTCTGCACCATCTT  
CCTGGTGGCTGTTCCACTTTACAGTGATACTATCAACTCCCTCATCGGCATTGCCATTGCCCTCTCAGGCCTGCC  
CTTTTACTTCCCTCATCATCAGAGTGCCAGAACATAAGCGACCGCTTTACCTCCGAAGGATCGTGGGGTCTGCCAC  
AAGGTACCTCCAGGTCCTGTGTATGTCAAGTTGCTGCAGAAATGGATTGGAAGATGGAGGAGAGATGCCCAAGCA  
ACGGGATCCCAAATCTAACTAAACACCATCTGGAATCCTGATGTGGAAGCAGGGGTTTCTGGTCTACTGGCTAG  
AGCTAAGGAAGTTGAAAAGGAAAGCTCACTTCTTTGGAGGCACCTGTCCAGAAGCCTGGCCTAGGCAGCTTCAAC  
CTTTGAACTTACTTTTTGAAATGAAAAGTAATTTATTTGTTTGTCTACATACTGTTCCAGACTTTTAAAGGGGAC  
AATGAAGGTGACTGTGGGGAGGAGCATGTCAGGTTTGGGCTTGGTTGTTTTAGAAGCACCTGGGTGTGCCTACCT  
ACTCCTCTTTTCTTTTAAAAGGGCCCAATGCTCCAATTTCTGTCTCCTTTAGAGAGACATGAAACTATCACA  
GGTGCTGGATGACAATAAAAGTTTATGTTCCCT



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**FIGURE 3981**

ATGGTAACTGGCTTTACAGATTTTACCCACTTCAAATATGGCCGCCAAGCTCCGTTCTCTTTACCGCCTGAT  
CTACGGCTACAATTCTGGCTTCATGCCCCGCTCCAAAAGTGCTTCCTCTCGAGGGGTTGTGGTTCTTACTGCGCA  
GGCGCAAAGCAAGTCTCTTCCGGGCAAATGGCGATGGGACTAATGTGCGGACGCCGGGAGCTTCTGCGCTTG  
CTACAGTCCGGGCGTCCGGGTCCACAGCGTCGCAGGGCCCTCGCAATGGCTTGGGAAACCGCTGACCACACGGCTC  
CTATTCCCAGTAGCCCCGTGCTGCTGTCGCCACACTACCTCTTCCTTGCGGCTTCCGGCCCCCGCAGCCTCAGT  
ACCTCTGCTATCTCTTTTGCAGAAAGTCCAGGTTTCAGGCCCCCTCCTGTTGTTGCTGCAACTCCCTCACCCACAGCA  
GTACCTGAGGTGGCTTCTGGAGAGACTGCAGATGTAGTCCAAACTGCTGCAGAGCAGAGCTTCGCTGAACTGGGG  
CTGGGGTCATACACCCAGTGGGACTGATCCAGAATTTACTGGAATTTATGCATGTTGATCTGGGCCTACCTTGG  
TGGGGGGCCATTGCTGCATGTACAGTCTTTGCCCGCTGCCTGATTTTTCTCTCATCGTGACGGGCCAGCGAGAG  
GCAGCCAGGATCCACAATCACTTGCCAGAGATCCAGAAGTTTTCCAGTCGAATCAGAGAGGCCAAGTTAGCAGGA  
GACCATATTGAGTATTACAAGGCTTCCTCGGAGATGGCACTTTACCAGAAAAACATGGTATTAAACTCTATAAA  
CCTCTCATTCTCCCTGTGACTCAGGCCCCAATCTTCATCTCCTTCTTCATTGCTTTGAGAGAGATGGCCAACCTT  
CCTGTGCCCAGCCTGCAGACAGGTGGCCTCTGGTGGTTCCAGGATCTCACGGTATCCGATCCCATCTACATATTA  
CCACTGGCAGTCACTGCTACAATGTGGGCTGTTCTTGAGCTAGGTGCTGAGACAGGTGIGCAAAGTTCTGACCTT  
CAGTGGATGAGAAATGTCATCAGAATGATGCCCCGTGATAACCTTGCCCATACCATGCATTTCCCCACGGCAGTG  
TTTATGTACTGGCTCTCCTCCAATTTGTTTTCCCTGGTCCAAGTATCCTGTCTCCGATTCCAGCAGTACGCACT  
GTACTTAAATCCCCCAGCGTGTGTACATGACCTGGACAAATTACCTCCACGGGAAGGCTTCCTAGAGAGCTTC  
AAAAAAGGCTGGAAAAATGCTGAAATGACGCGTCAGCTGCGAGAGCGTGAACAACGCATGCGGAATCAGTTGGAG  
CTAGCAGCCAGGGGTCCTTTACGACAGACCTTTACCCACAACCCTCTCCTACAACCTGGAAAGGATAACCCTCCC  
AATATCCCTAGCAGCAGCAGCAAACCAAAGTCAAAGTATCCCTGGCACGACACACTTGGCTTGA

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**FIGURE 3982**

MVTWLYRFLPTS NMAAKLRSLPPDLRLQFWLHARLQKCFLSRGCSYCAGAKASPLPGKMAMGLMCGRRELLRL  
LQSGRRVHSVAGPSQWL GKPLTTRLLFPVAPCCCRPHYLFLAASGPRSLSTS AISFAEVQVQAPPVVAATPSPTA  
VPEVASGETADV VQTAAEQSFAELGLGSYTPVGLIQNLLEFMHVDLGLPWWGAI AACTVFARCLIFPLIVTGQRE  
AARIHNHLPEIQKFSSRIREAKLAGDHIEYYKASSEMALYQKKHGIKLYKPLILPVTQAPIFISFFIALREMANL  
PVPSLQTGGLWWFQDLTVSDPIYILPLAVTATMWAVLELGAETGVQSSDLQWMRNVIRMMPLITLPITMHFPTAV  
FMYWLSSNLFSLVQVSLRIPAVRTVLKIPQRVVHDLDKLPPREGFLESFKKGWKN AEMTRQLREREQMRNQLE  
LAARGPLRQTFTHNPLLQPGKDNPPNIPSSSSKPKSKYPWHDTLG

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**FIGURE 3983**

CTCCCGGGTCAGCTGGTGTGCGGTCAGGCGCTGGGCGGGCTCGCCAGGACCTGGCAAGGCTTGTTTACTATGGC  
CGATGATCTGGAGCAGCAGTCTCAAGGCTGGCTGAGTAGCTGGCTGCCCACGTGGCGCCCCACTTCCATGTCTCA  
GCTGAAGAATGTGGAAGCCAGGATCCTCCAGTGTCTCCAGAATAAGTTCTGGCCAGATATGTATCCCTCCCAAA  
CCAGAATAAGATCTGGACGGTGACTGTGAGCCCCGAGCAAAACGACCGCACCCCCCTTGGTGATGGTGCATGGTTT  
TGGGGGCGGCGTGGGTCTCTGGATCCTCAACATGGACTCACTGAGTGCCCCGCCGCACACTGCACACCTTCGATCT  
GCTTGGCTTCGGGCGAAGCTCAAGGCCAGCATTCCCAAGGGACCCGGAGGGGGCTGAGGATGAGTTTGTGACATC  
GATAGAGACATGGCGGGAGACCATGGGGATCCCCAGCATGATCCTCCTGGGGCACAGTTTGGGAGGATTCTTGGC  
CACTTCTTACTCAATCAAGTACCTGATAGAGTTAAACACCTCATCCTGGTGGACCCATGGGGCTTTCCTCCCG  
ACCAACTAACCCAGTGAGATCCGTGCACCCCCAGCCTGGGTCAAAGCCGTGGCATCTGTCTTAGGACGTTCCAA  
TCCATTGGCTGTCTTCGAGTAGCTGGGCCCTGGGGGCTGGTCTGGTGCAGCGATTCCGGCCGGACTTCAAACG  
CAAGTTTGCACTTCTTTGAAGATGATACCATATCAGAGTATATTTACCACTGCAACGCACAGAATCCAGTGG  
TGAGACAGCATTCAAAGCCATGATGGAGTCCTTTGGCTGGGCCCCGGCGCCCTATGCTGGAGCGAATTCATTGAT  
TCGAAAAGATGTGCTATCACTATGATCTACGGGTCCGACACCTGGATAGATAACAGTACGGGAAAAAAGGTGAA  
GATGCAGCGGGCCGATTCTATGTCCGAGACATGGAGATTAAGGGTGCTCCACCATGTCTATGCTGACCAGCC  
ACACATCTTCAATGCTGTGGTGGAGGAGATCTGCGACTCAGTTGATTGAGCTGCTCTCTGAAGAGGAAGAGGAGA  
AAGCCAGAGAGTCACTCTTACCTCCCTGTCTGCTTACTCACCCACTCTGTCTTTCTCACCACCTAACATGTGC  
CAGCCAGGCAGAGTCTTGTGCTGTTCCAGAACAGGACGACAGTGAAGAAGACACTCTTGACCCTACACTGAAGG  
CTGAAGGCAGAAGCCACAAGAGGCCCTTGAGTGCCACCCCCAGGGAAGAACATAAAGGGTTGCACAATGCCACCCA  
TCCACTCCTTGCCAAGTGTTACCCAGATGGTGGAGGATGTGAAGGGATTGCACCAAGCCACATTCACTCTCTCTG  
TGGCCTTTCTTCTCTGGGCAAAGAAGGGCTTCCAGTGGCCTTTCTCACTCTGTAGTGTTTGTGGGGATAGGTT  
CCATGCAAGAACACCTTCTCTCTCCATCCCCCACTTCACCCCATCCCATACCAAGTTCATCCAGGGTCTGCTTAA  
CTGCCAAGAGCAGGTCTTGAGATTCCCTTCACCTGCAGAGTCTTTTCATGACCTAGGAGGTCTTATTCAAAGCC  
CTCATTGACAGAGGAGGAAACAGGCCAAGGCAGGACATGGCTGGACCATGGTGATACAGCTCTGTGTGATTCAAG  
TTCTGGCAGAGCTTGTAAGGCTAGAGCCAGGTCTGCCGACACCTGTGCTTGTGTCACACTTGATTGCTAAGG  
CTGGAGACAGGCACCATTGCCATGGGGCTGGTCTAGTCACTGGCCGAGGATAAGCCCGTCCCTGTCCCACATTC  
TAGCCCCACTATGCGGGGGTGCTGTTGTCTGCTGTCTCATCCCCAGCTGCCTAAGCTAGGGACACTCAAGT  
GCTTCTTCTCTTGCCCCATCTTCTTCCCACTGGAGGCCTCTGAGCCTCCCCGTGTGCTTGGGCCCTGAAGCCCC  
ATATGTAGTATAGAGCAAAGGTGGCTCCTGGTGAAGAGAGGGTGGAAGGCCCTTCAGCCCCAGGGCCATGTCTG  
GGTCTCTCATGCCCCATCAGTCTCTGCAGTTTCTCTACCTGCCCCCAGAGCTGAGGCCATCTGCAAGCCCCCTGCC  
ATGGCCCAATGGGGAGCCTCCAGCCACAAGTTCCCTGTCTTATCAGCCACTGGGTGGTTCCCACTGCATGACCC  
TCTATCCCTGCCATCTGTCCCCATGGTTTCCAGCTCAATCCACCCCTGACCCATCTGTGAGCTTTTCCCAGGGA  
GCCGTTTTCAGGGGTTCTGGGCAGTAGGCTGGGCCTGGCCTCAGAACCTGGTGGCTCCTGCCTGCTCCTTCACTTT  
TGTAATAACCATCCCTTACCAGAATGGTATTAACCTCTGGTGCTTTGTACTACTGGTCCAGCTGCCTTGGGCTC  
CTTTTCTATATTAATAAAGAAACGAGTAAAAATT

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**FIGURE 3984**

CATCCGGTGTGGTCGACGGGTCCTCCAAGAGTTTGGGGCGCGGACCGGAGTACCTTGCGTGCAGTTATGTCGGCG  
TCGGTAGTGTCTGTCATTTTCGCGGTTCTTAGAAGAGTACTTGAGCTCCACTCCGCAGCGTCTGAAGTTGCTGGAC  
GCGTACCTGCTGTATATACTGCTGACCGGGGCGCTGCAGTTCGGTTACTGTCTCCTCGTGGGGACCTTCCCCCTC  
AACTCTTTTCTCTCGGGCTTCATCTCTGTGTGGGGAGTTTCATCCTAGCGGTTTGCCGTGAGAATACAGATCAAC  
CCACAGAACAAAGCGGATTTCCAAGGCATCTCCCCAGAGCGAGCCTTTGCTGATTTTCTCTTGCCAGCACCATC  
CTGCACCTTGTTGTCATGAACCTTTGTTGGCTTGAATCATTCTCATTACTTAATTGAGGAGTAGGAGACTAAAAGA  
ATGTTCACTCTTTGAATTTCTGGATAAGAGTTCTGGAGATGGCAGCTTATTGGACACATGGATTTTCTTCAGAT  
TTGACACTTACTGCTAGCTCTGCTTTTATGACAGGAGAAAAGCCCAGAGTTCACTGTGTGTCAGAACAACCTTC  
TAACAAACATTTATTAATCCAGCCTCTGCCTTTCATTAAATGTAACCTTTGCTTTCCAAATTAAAGAACTCCAT  
GCCACTCCTCAAAAAAAAAAAAAA

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**FIGURE 3985**

MSASVVSVISRFLEEYLSSTPQRLKLLDAYLLYILLTGALQFGYCLLVGTFFNSFLSGFISCVGSFILAVCLRI  
QINPQNKADFQGISPERAFADFLFASTILHLVVMNFVG

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**FIGURE 3986**

GTGTTGGTTTCAGAGGAGGGACCAGGCAGAAGGTGGTTGAGAGGCAGAGCTGCCCCCTGAGTGAGCCATGCAGAGGA  
TCTCCTCCCTCATCCATCTCTCTCTCTCTCTGCGGCAGGAGTCATGTCAGCCATTGAGTTGGTGCCTGAACACCAAA  
CAGTGCCTGTGTCAATAGGGGTCCCTGCCACCCTCAGGTGCTCCATGAAAGGAGAAGCGATCGGTAACACTACTATA  
TCAACTGGTACAGGAAGACCCAAGATATCCAGAACCCTGACCCTGCCGTGTACCAGCTGAGAGACTCTAAATCCA  
GTGACAAGTCTGTCTGCCTATTCACCGATTTTGATTCTCAAACAAATGTGTCACAAAGTAAGGATTCTGATGTGT  
ATATCACAGACAAAACCTGTGCTAGACATGAGGTCTATGGACTTCAAGAGCAACAGTGCTGTGGCCTGGAGCAACA  
AATCTGACTTTGCATGTGCAAACGCCTTCAACAACAGCATTATTCCAGAAGACACCTTCTTCCCCAGCCCAGAAA  
GTTCTGTGATGTCAAGCTGGTCGAGAAAAGCTTTGAAACAGATACGAACCTAAACTTTCAAACCTGTCAAGTGA  
TTGGGTTCCGAATCCTCCTCCTGAAAGTGGCCGGGTTTAATCTGCTCATGACGCTGCGGCTGTGGTCCAGCTGAG  
ATCTGCAAGATTGTAAGACAGCCTGTGCTCCCTCGCTCCTTCTCTGCATTGCCCCCTCTTCTCCCTCTCCAAACA  
GAGGGAACCTCTCCTACCCCCAAGGAGGTGAAAGCTGCTACCACCTCTGTGCCCCCCCCGGCAATGCACCAACTGGA  
TCCTACCCGAATTTATGATTAAAGATTGCTGAAGAGCTGCCAAACACTGCTGCCACCCCCCTCTGTTCCCTTATTGC  
TGCTTGCTCACTGCCTGACATTACGGCAGAGGCAAGGCTGCTGCAGCTCCGCTGGCTGTGCACATTCCCTCCTGC  
TCCCAGAGACTGCCTCCGCCATCCACAGATGATGGATCTTCAGTGGGTCTCTTGGGCTCTAGGTCCCGGAGA  
ATGTTGTGAGGGGTTTATTTTTTTTTTAATAGTGTTTCATAAAGAAAGACATAGTATTCTTCTTCTCAAGACGTGGG  
GGGAAATTATCTCATTATCGAGGCCCTGCTATGCTGTGTGTCTGGGCGTGTGTATGTCCTGCTGCCGATGCCTT  
CATTAATGATTTGGAAGAGC

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**FIGURE 3987**

CCTTATTCGAGAGGTGTCAGGGCTGGGAGACTAGGATGTCGGACACGTGGAGCTCTATCCAGGCCCACAAGAAGC  
AGCTGGACTCTCTGCGGGAGAGGCTGCAGCGGAGGCGGAAGCAGGACTCGGGGCACTTGGCAGCAGACGTTGCGC  
CTTCTGCAAGTAGTTCGCGGTTCCCTCCTCAGCTGGGCCTCGGTTCTTCCAGCTCACTTTTACCGGACGGACGCT  
TGAGCCCCACCCCTCGTCCGCCTTGCCCACTCCTCTTCAGACTGCGAGGACGTCGCCTTTGTGAGGCTGCTCAGCC  
CCCTATCCCGCGAAGCAGCAAGAACCCCTTTTGTGCTGCTTTG

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**FIGURE 3988**

GAGAATTGGCTATATCCTGGAGCGAGTGCTGGGAGGTGCTAGTCCGCCGCGCCTTATTGAGAGGTGTCAGGGCT  
GGGAGACTAGGATGTCGGACACGTGGAGCTCTATCCAGGCCACAAAGAAGCAGCTGGACTCTCTGCGGGAGAGGC  
TGCAGCGGAGGCGGAAGCAGGACTCGGGGCACCTTGGATCTACGGAATCCAGAGGCAGCATTGTCTCCAACCTTCC  
GTAGTGACAGCCAGTGCCTACTGCACCCACCTCTGGTGGCCCTAAGCCCAGCACAGCTTCAGCAGTTCTCTGAAT  
TAGCTACAGATCCTGAGTTAGAGAAGAAGTTGCTACACCACCTCTCTGATCTGGCCTTAACATTGCCCCACTGATG  
CTGTGTCCATCTGTCTTGCCATCTCCACGCCAGATGCTCCTGCCACTCAAGATGGGGTAGAAAGCCTCCTGCAGA  
AGTTTGCAGCTCAGGAGTTGATTGAGGTAAAGCGAGGTCTCCTACAAGATGATGCACATCCTACTCTTGTAACCT  
ATGCTGACCATTCCAAGCTCTCTGCCATGATGGGTGCTGTGGCAGAAAAGAAGGGCCCTGGGGAGGTAGCAGGGA  
CTGTACAGGGCAGAAGCGCGGTGCAGAACAGGACTCGACTACAGTAGCTGCCTTTGCCAGTTCGTTAGTCTCTG  
GTCTGAACTCTTCAGCATCGGAACCAGCAAAGGAGCCAGCCAAGAAATCAAGGAAACATGCTGCCTCAGATGTTG  
ATCTGGAGATAGAGAGCCTTCTGAACCAACAGTCCACTAAGGAACAACAGAGCAAGAAGGTCAATCAGGAGATCC  
TAGAGCTATTAATACTACAACAGCCAAGGAACAATCCATTGTTGAAAAATTTGCTCTCGAGGTGCGGCCCAAG  
TGCAAGAATTCTGTGACTATGGAACCAAGGAGGAGTGCATGAAAGCCAGTGATGCTGATCGACCCTGTCGCAAGC  
TGCACCTTCAGACGAATTATCAATAAACACACTGATGAGTCTTTAGGTGACTGCTCTTTCCTTAATACATGTTTCC  
ACATGGATACCTGCAAGTATGTTCACTATGAAATTGATGCTTGATGGATTCTGAGGCCCTGGCAGCAAAGACC  
ACACGCCAAGCCAGGAGCTTGCTCTTACACAGAGTGTGCGAGGTGATTCCAGTGCAGACCGACTCTTCCCACCTC  
AGTGGATCTGTTGTGATATCCGCTACCTGGACGTGATCTTGGGCAAGTTTGAGTTGTGATGGCTGACCCAC  
CCTGGGATATTACATGGAAGTGCCTATGGGACCTGACAGATGATGAGATGCGCAGGCTCAACATACCCGTAC  
TACAGGATGATGGCTTTCTCTTCTCTGGGTACAGGCAGGGCCATGGAGTTGGGGAGAGAATGTCTAAATCTCT  
GGGGGTATGAACGGGTAGATGAAATTATTTGGGTGAAGACAAATCAACTGCAACGCATCATTCCGACAGGCCGTA  
CAGGTCACTGGTTGAACCATGGGAAGGAACACTGCTTGGTTGGTGTCAAAGGAAATCCCCAAGGCTTCAACCAGG  
GTCTGGATTGTGATGTGATCGTAGCTGAGGTTCGTTCCACCAGTCATAAACCAGATGAAATCTATGGCATGATTG  
AAAGACTATCTCCTGGCACTCGCAAGATTGAGTTATTTGGACGACCACACAATGTGCAACCCAACTGGATCACCC  
TTGGAACCAACTGGATGGGATCCACCTACTAGACCCAGATGTGGTTGCACGGTTCAAGCAAAGGTACCCAGATG  
GTATCATCTCTAAACCTAAGAATTTATAGAAAGCACTTCCTTACAGAGCTAAGAATCCATAGCCATGGCTCTGTAA  
GCTAAACCTGAAGAGTGATATTTGTACAATAGCTTCTCTTTATTTAAATAAACATTTGTATTGTAAAAA  
AAAAA



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**FIGURE 3989**

MSDTWSSIIQAHKKQLDSLRLRERLQRRRKQDSGHLDLRNPEAALSPTFRSDSPVPTAPTSGGPKPSTASAVPELATD  
PELEKKLLHHLSDLALTLPTDAVSICLAISTPDAPATQDGVESLLQKFAAQELIEVKRGLLQDDAHPTLVITYADH  
SKLSAMMGAVAEKKGPGEVAGTVTGQKRRAEQDSTTVAAFASSLVSGLNSSASEPAKEPAKKSARKHAASDVLEI  
ESLLNQSTKEQQSKKVSQEILELLNNTTTAKEQSIVEKFRSRGRAQVQEFCDYGTKEECMKASDADRPCRKLHFR  
RIINKHTDESLGDCSFLNTCFHMDTCKYVHYEIDACMDSEAPGSKDHTPSQELALTQSVGGDSSADRLFPQWIC  
CDIRYLDVSI LGKFAVVMADPPWDIHMELPYGTLTDEMRLNIPVLQDDGFLFLWVTGRAMELGRECLNLWGYE  
RVDEIIWVKTNQLQRIIRTGRTGHWLNHGKEHCLVGKGNPQGFNQGLDCDVIVAEVRSTSHKPDDEIYGMIERLS  
PGTRKIELFGRPHNVQPNWITLGNQLDGIHLDPDVVARFKQRYPDGIISKPKNL

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**FIGURE 3990**

TTTTGTGAAGAGACGAAGACTGAGCGGTTGTGGCCGCGTTGCCGACCTCCAGCAGCAGTCGGCTTCTCTACGCAG  
AACCCGGGAGTAGGAGACTCAGAATCGAATCTCTTCTCCCTCCCCTTCTTGTGAGATTTTTTGTATCTTCAGCTA  
CATTTTCGGCTTTTGTGAGAAACCTTACCATCAAACACGATGGCCAGCAACGTTACCAACAAGACAGATCCTCGCT  
CCATGAACCTCCCGTGTATTTCATTGGGAATCTCAACACTCTTGTGGTCAAGAAATCTGATGTGGAGGCAATCTTTT  
CGAAGTATGGCAAAATTGTGGGCTGCTCTGTTTCATAAGGGCTTTGCCTTCGTTTCAGTATGTTAATGAGAGAAATG  
CCCGGGCTGCTGTAGCAGGAGAGGATGGCAGAATGATTGCTGGCCAGGTTTTAGATATTAACTGGCTGCAGAGC  
CAAAGTGAACCGAGGAAAAGCAGGTGTGAAACGATCTGCAGCGGAGATGTACGGGTCAGTAAACAGAACACCCCTT  
CTCCGTCCCCTCTACTCAGCTCCTCTTTTGACTTGGACTATGACTTTCAACGGGACTATTATGATAGGATGTACA  
GTTACCCAGCACGTGTACCTCCTCCTCCTCCTATTGCTCGGGCTGTAGTGCCTTCGAAACGTCAGCGTGTATCAG  
GAAACACTTCACGAAGGGGCAAAAGTGGCTTCAATTCTAAGAGTGGACAGCGGGGATCTTCCAAGTCTGGAAATG  
AAAGGAGATGACCTTCAGGCCATTAAGAAGGAGCTGACCCAGATAAAACAAAAAGTGGATTCTCTCCTGGAAAAAC  
CTGGAAAAAATTGAAAAGGAACAGAGCAAACAAGCAGTAGAGATGAAGAATGATAAGTCAGAAGAGGAGCAGAGC  
AGCAGCTCCGTGAAGAAAGATGAGACTAATGTGAAGATGGAGTCTGAGGGGGGTGCAGATGACTCTGCTGAGGAG  
GGGGACCTACTGGATGATGATGATAATGAAGATCGGGGGGATGACCAGCTGGAGTTGATCAAGGATGATGAAAAA  
GAGGCTGAGGAAGGAGAGGATGACAGAGACAGCGCCAATGGCGAGGATGACTCTTAAGCACATAGTGGGGTTTTAG  
AAATCTTATCCCAATTATTTCTTTACCTAGGCGCTTGTCTAAGATCAAATTTTTCACCAGATCCTCTCCCCTAGTA  
TCTTCAGCACATGCTCACTGTTCTCCCCATCCTTGTCTTCCCATGTTTCAATTAATTCATATTGCCCGCGCCTAG  
TCCCATTTTCACTTCCTTTGACGCTCCTAGTAGTTTTGTAAAGTCTTACCCTGTAATTTTTGCTTTTAATTTTGA  
TACCTCTTTATGACTTAAACAATAAAAAGGATGTATGGTTTTATCAACTGTCTCCAAAATAATCTCTTGTATGC  
AGGGAGTACAGTTCTTTTCATTACATACATAAGTTTCAGTAGTTGCTTCCCTAACTGCAAAGGCAATCTCATTTAGT  
TGAGTAGCTCTTGAAAGCAGCTTTGAGTTAGAAGTATGTGTGTTACACCCTCACATTAGTGTGCTGTGTGGGGCA  
GTTCAACACAAATGTAACAATGTATTTTGTGAATGAGAGTTGGCATGTCAAATGCATCCTCTAGAAAAATAATT  
AGTGTATAGTCTTAAGATTTGTTTTCTAAAGTTGATACTGTGGGTTATTTTTGTGAACAGCCTGATGTTTGGGA  
CCTTTTTCTCAAATAAAACAAGTCCTTATTAAACCAGGAATTTGGAG

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**FIGURE 3991**

CGGCCCCCGCATTCCCCGCCCCACCTCCCCGCCTTGTTGTCCAACCTCTCCCGGAGCAGCCGGAGAGCAGGCG  
TCGGGACGCAGCAAAGAGAGGAGAGGCCACCATGGCGGAGCTGCAGGAGGTGCAGATCACAGAGGAGAAGCCACT  
GTTGCCAGGACAGACGCCTGAGGCGGCCAAGGAGGCTGAGTTAGCTGCCCGAATCCTCCTGGACCAGGGACAGAC  
TCACTCTGTGGAGACACCATAACGGCTCTGTCACTTTCACTGTCTATGGCACCCCCAAACCCAAACGCCCAGCGAT  
CCTTACCTACCACGATGTGGGACTCAACTATAAATCTTGCTTCCAGCCACTGTTTCAGTTTCGAGGACATGCAGGA  
AATCATTCAGAACTTTGTGCGGGTTCATGTGGATGCCCTTGAATGGAAGAGGGAGCCCCCTGTGTTCCCTTTGGG  
ATATCAGTACCCATCTCTGGACCAGCTGCAGACATGATCCCTTGCGTCTGCAGTACCTAAATTTCTCTACAAT  
AATTGGAGTTGGTGTGGAGCTGGAGCCTACATCCTGGCGAGATATGCTCTTAACCACCCGGACACTGTTGAAGG  
TCTTGTCCTCATCAACATTGATCCCAATGCCAAGGGTTGGATGGATTGGGCAGCCCACAAGCTAACAGGCCTCAC  
CTCTTCCATTCCGGAGATGATCCTTGACATCTTTTCAGCCAGGAAGAGCTCTCTGGAAATTCTGAGTTGATACA  
AAAGTACAGAAATATCATTACACATGCACCCAACCTGGATAACATTGAATTGTACTGGAACAGCTACAACAACCG  
CCGAGACCTGAACTTTGAGCGTGGAGGTGATATCACCCCTCAGGTGTCTGTGATGCTGGTGGTAGGAGACCAAGC  
ACCTCATGAAGATGCAGTGGTGAATGTAACCTCAAACTGGACCCACCCAGACCTCGTTCCTCAAGATGGCTGA  
CTCCGGAGGTGAGCCCCAGCTGACTCAGCCAGGCAAGCTGACCGAGGCCTTCAAGTACTTCTGCAAGGCATGGG  
CTACATGGCCCTCATCTGCATGACTCGCTGTCCCGGTCTCGTACAGCCTCTCTGACCAGTGCAGCATCCGTTGA  
TGGCAACCGGTCCCGCTCTCGCACCCCTGTCCAGAGCAGCGAGTCTGGAACCTCTTTCTTCGGGGCCCCCGGGGCA  
CACCATGGAGGTCTCCTGTTGAATGGCCCTTGTTGCCCTAGAGTGGGACCCAGCCCTCACCTCCCCCAGAGCTAA  
CCTGGGAGGTGCTGAAGGGGCATTGGGCCACCGTAAGCAAGGGAAAAAGGGCAGATCATGCGGGGAGATGACCTT  
GATCTTTGATTGCTACCCCTAACCTTGACCTTTAACCCGTGATTCCCCCAGCTCCTGGAAGAGATGTCCTAATAT  
CTCTTAGGGACCCAGACCCCTAAATTCTCCTCCTCCCCATTTTGATGTTAAGGTGGAGAGGGCATATGCATCCT  
CTGTCTGATCTAGGTGTCTATAGCTGAGGGGTAAAGAGGTGTTGTAGTTGCTCTGGTGCCTCCATCAGACTCTC  
CCTACTTGTCCCATATTTGCAAGGGGAGGGGATTTGGGGCTGGGGCTCCATTACCAAAGCTGAGGTGGCTTCTC  
ATTAACCCTTTAGGACTCTGAAGGGTATGGACCTACGTGAATGTGTGTCAGGGGGAGACTTGCTGGTGGGTTAGT  
GGTCTCAGGATGTGATAGAAACATCCAGTGTAAGGAAGTGGAAATGGGAGTTGGCGGGCAGTGAACGAGTG  
TGGGGAAGGATTGGTGTGGGGCAACAGGAAGGGGCTGGGGCCGTTTGGCTGCACTAACTTTGGTAGCTCAGTG  
TGATCTAGAGTGGGACTGGGGAGGGAGCTAAGCTTGGGCTGGGCTGCTTGGGGCTTGGCATAGGGTGGAAAGGG  
CTACCCTGGGGCTCTGACCACACTGTAGTATGTGTGGAGGGTGCCCTCCCGTCTCCCACTTCTGCTATAACA  
ATAAACTGTAGAGGAATCTGAGTACCGTT

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**FIGURE 3992**

GCTGCCCCTGAACCCCAAGAACAACCAGCTGGATCAGTTCTCACAGGAGCTACAGGCCGGAGACTGGGAAACATGG  
TTCCAAACTGTTCACTTCCCAAATTTGTCTGCTTCTTCTGTTGGGGCTTCTGGCTGTGGAGGGCTCACTCCATG  
TCAAACCTCCACAGTTTACCTGGGCTCAATGGTTTGAAACCCAGCACATCAATATGACCTCCCAGCAATGCACCA  
ATGCAATGCAGGTCATTAAACAATTATCAACGGCGATGCAAAAACCAAAATACTTTCCTTCTTACAACCTTTTGCTA  
ACGTAGTTAATGTTTGTGGTAACCCAAATATGACCTGTCCTAGTAACAAAACCTCGCAAAAATTGTCACCACAGTG  
GAAGCCAGGTGCCTTTAATCCACTGTAACCTCACAACTCCAAGTCCACAGAATATTTCAAACCTGCAGGTATGCGC  
AGACACCAGCAAACATGTTCTATATAGTTGCATGTGACAACAGAGATCAACGACGAGACCCTCCACAGTATCCGG  
TGGTTCCAGTTCACCTGGATAGAATCATCTTAAGCTCCTGTATCAGCACTCCTCATCATCACTCATCTGCCAAGCT  
CCTCAATCATAGCCAAGATCCCATCTCTCCATATACTTTGGGTATCAGCATCTGTCCTCATCAGTCTCCATACCC  
CTTCAGCTTTCCTGAGCTGAAGTGCCTTGTGAACCTGCAATAAACTGCTTTGCAAATTC

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**FIGURE 3993**

MVPKLFTSQICLLLLLGLLAVEGSLHVKPPQFTWAQWFETQHINMTSQQCTNAMQVINNYQRRCKNQNTFLLTTF  
ANVVNVCGNPNMTCPSNKTRKNCHHSGSQVPLIHCNLTTPSPQNISNCRYAQTTPANMFYIVACDNRDQRRDPPQY  
PVVPVHLDRII

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**FIGURE 3994**

AGAGACTTGGGTTTTGCTCCCTAGGAGCCCTGGAATAGCTTTGGCCAGAATTCCCTATCTCCCATTAGAACCTCT  
CCTTTGCGTCCTTTGTAACTCCAAGTCTACTTGGTGAAAACGCCCACGAAGAAGTAACAAGGACTTTGTTCCCT  
AGTGTGCCAGGTTTGGGCACCAAGTGTGTAGTGGCTTTCTCTGCTGCTCCTTGTGCATCAGCAGACAGATGTGGT  
TCACATAGGAAGAAAGACTAACGTAGGCAAAGATTTGCTCTTTCTTCAGCAGCCCTAGAAAGACGGCGGCCTGGG  
TGATTCACTACTCCTTCCTCACGTCCTTGATTTTATTTGAACTGAGCTCCAGATGCTCCTCCACCCCTTTTCCTC  
TTGGAAGCCAAACCCCTTTGTAATCTGTATAAGGTCCACACCCCGGGAGCTGAGTGATTGCAGAACTGGCCTTC  
CATCTCTCTCAGACACCAAGCTGCAGATCCAGGCTTTTCTGGGAAAGTGAGGCCACCATGGCTCTGGAGAAGTCT  
CTTGTCCGGCTCCTTCTGCTTGTCTGATACTGCTGGTGTGGGCTGGGTCCAGCCTTCCCTGGGCAAGGAATCC  
CGGGCCAAGAAATTCAGCGGCAGCATATGGACTCAGACAGTTCCCCCAGCAGCAGCTCCACCTACTGTAACCAA  
ATGATGAGGCGCCGGAATATGACACAGGGGCGGTGCAAACCAAGTGAACACCTTTGTGCACGAGCCCCTGGTAGAT  
GTCCAGAATGTCTGTTTCCAGGAAAAGGTCACCTGCAAGAACGGGCAGGGCAACTGCTACAAGAGCAACTCCAGC  
ATGCACATCACAGACTGCCGCCTGACAAACGGCTCCAGGTACCCCAACTGTGCATACCGGACCAGCCCGAAGGAG  
AGACACATCATTGTGGCCTGTGAAGGGAGCCCATATGTGCCAGTCCACTTTGATGCTTCTGTGGAGGACTCTACC  
TAAGGTCAGAGCAGCGAGATACCCACCTCCCTCAACCTCATCCTCTCCACAGCTGCCTCTTCCCTCTTCCCTTCC  
CTGCTGTGAAAGAAGTAACTACAGTTAGGGCTCCTATTCAACACACACATGCTTCCCTTTCCCTGAGTCCCATCCC  
TGCGTGATTTTGGGGTGAAGAGTGGGTTGTGAGGTGGGCCCCATGTTAACCCCTCCACTCTTCTTTCAATAAA  
ACGCAGTTGCAAACACCTGAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3995**

MALEKSLVRLLLLVLILLVLGWVQPSLGKESRAKKFQRQHMDSDSSPSSSSTYCNQMMRRRNMTQGRCKPVNTFV  
HEPLVDVQNVCFQEKVTCKNGQGCYKSNSSMHI TDCRLTNGSRYPNCAVRTSPKERHIIVACEGSPYVPVHFDA  
SVEDST

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**FIGURE 3996**

AACTGTGCGAACCAGACCCGGCAGCCTTGCTCAGTTCAGCATAGCGGAGCGGATCCGATCGGATCGGAGCGGATC  
GGAGCACACCGGAGCAGGCTCATCGAGAAGGCGTCTGCGAGACCATGGAGAACGGATACACCTATGAAGATTATA  
AGAACACTGCAGAATGGCTTCTGTCTCACACTAAGCACCGACCTCAAGTTGCAATAATCTGTGGTTCTGGATTAG  
GAGGTCTGACTGATAAATTAAGTCAAGGCCAGATCTTTGACTACGGTGAAATCCCCAACTTTCCCGAAGTACAG  
TGCCAGGTCATGCTGGCCGACTGGTGTGTTGGGTTCTGAATGGCAGGGCCTGTGTGATGATGCAGGGCAGGTTCC  
ACATGTATGAAGGGTACCCACTCTGGAAGGTGACATTCCCAGTGAGGGTTTTCCACCTTCTGGGTGTGGACACCC  
TGGTAGTCACCAATGCAGCAGGAGGGCTGAACCCCAAGTTTGAGGTTGGAGATATCATGCTGATCCGTGACCATA  
TCAACCTACCTGGTTTTAGTGGTCAGAACCCTCTCAGAGGGCCCAATGATGAAAGGTTTGAGATCGTTTTCCCTG  
CCATGTCTGATGCCTACGACCGGACTATGAGGCAGAGGGCTCTCAGTACCTGGAAACAAATGGGGGAGCAACGTG  
AGCTACAGGAAGGCACCTATGTGATGGTGGCAGGCCCCAGCTTTGAGACTGTGGCAGAATGTCGTGTGCTGCAGA  
AGCTGGGAGCAGACGCTGTTGGCATGAGTACAGTACCAGAAGTTATCGTTGCACGGCACTGTGGACTTCGAGTCT  
TTGGCTTCTCACTCATCTAACAAGGTCATCATGGATTATGAAAGCCTGGAGAAGGCCAACCATGAAGAAGTCT  
TAGCAGCTGGCAAACAAGCTGCACAGAAATTGGAACAGTTTGTCTCCATTCTTATGGCCAGCATTCCACTCCCTG  
ACAAAGCCAGTTGACCTGCCTTGGAGTCGTCTGGCATCTCCACACAAGACCCAAGTAGCTGCTACCTTCTTTGG  
CCCCCTTGCTGGAGTCATGTGCCTCTGTCTTAGGTTGTAGCAGAAAGGAAAAGATTCTGTCTTCCCTTTCCC  
ACTTTCTTCTACCAGACCCCTTCTGGTGCCAGATCCTCTTCTCAAAGCTGGGATTACAGGTGTGAGCATAGTGAGA  
CCTTGGCGCTACAAAATAAAGCTGTTCTCATTCTGTTCTTTCTTACACAAGAGCTGGAGCCCGTGCCCTACCAC  
ACATCTGTGGAGATGCCAGGATTTGACTCGGGCCTTAGAACTTTGCATAGCAGCTGCTACTAGCTCTTTGAGAT  
AATACATTCCGAGGGGCTCAGTTCTGCCTTATCTAAATCACCAGAGACCAACAAGGACTAATCCAATACCTCTT  
GGA



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**FIGURE 3997**

CAGACAGACCAATCACGCGCATTCTTCGGCCACGACAAGCGCGCCTCTGATCACGTGACCAGGTCCGCTACCCAC  
GTGGGGGCTCAGCGTGCACCCCTCTTTGTGCTCGGGTTAGGAGGAGCTAGGCTGCCATCGGGCCGGTGACAGATAC  
GGGGTTGCTCTTTTGCTCATAAGAGGGGCTTCGCTGGCAGTCTGAACGGCAAGCTTGAGTCAGGACCCCTTAATTA  
AGATCCTCAATTGGCTGGAGGGCAGATCTCGCGAGTAGGGCAACGCGGTAAAAATATTGCTTCGGTGGGTGACGC  
GGTACAGCTGCCCAAGGGCGTTTCGTAACGGGAATGCCGAAGCGTGGGAAAAAGGGAGCGGTGGCGGAAGACGGGG  
ATGAGCTCAGGACAGAGCCAGAGGCCAAGAAGAGTAAGACGGCCGCAAAGAAAAATGACAAAGAGGCAGCAGGAG  
AGGGCCCAGCCCTGTATGAGGACCCCCAGATCAGAAAACCTCACCCAGTGGCAAACCTGCCACACTCAAGATCT  
GCTCTTGGAATGTGGATGGGCTTCGAGCCTGGATTAAGAAGAAAGGATTAGATTGGGTAAAGGAAGAAGCCCCAG  
ATATACTGTGCCTTCAAGAGACCAAAATGTTAGAGAACAACTACCAGCTGAACTTCAGGAGCTGCCTGGACTCT  
CTCATCAATACTGGTCAGCTCCTTCGGACAAGGAAGGTACAGTGGCGTGGGCCTGCTTTCCCGCCAGTGCCAC  
TCAAAGTTTCTTACGGCATAGGCGATGAGGAGCATGATCAGGAAGGCCGGGTGATTGTGGCTGAATTTGACTCGT  
TTGTGCTGGTAACAGCATATGTACCTAATGCAGGCCGAGGTCTGGTACGACTGGAGTACCGGCAGCGCTGGGATG  
AAGCCTTTCGCAAGTTCTGAAGGGCCTGGCTTCCCGAAAGCCCTTGTGCTGTGTGGAGACCTCAATGTGGCAC  
ATGAAGAAATTGACCTTCGCAACCCCAAGGGGAACAAAAAGAATGCTGGCTTCACGCCACAAGAGCGCCAAGGCT  
TCGGGGAATTACTGCAGGCTGTGCCACTGGCTGACAGCTTTAGGCACCTCTACCCCAACACACCCCTATGCCTACA  
CCTTTTGGACTTATATGATGAATGCTCGATCCAAGAAATGTTGGTTGGCGCCTTGATTAGTTTTTGTGTGCCACT  
CTCTGTTACCTGCATTGTGTGACAGCAAGATCCGTTCCAAGGCCCTCGGCAGTGATCACTGTCCTATCACCCAT  
ACCTAGCACTGTGACACACCCCTAAATCAGCTTTGAGCCTGGGAAATAAGCCCCCTCAACTACCATTCTCTCTT  
AAACACTCTTCAGAGAAATCTGCATTCTATTTCTCATGTATAAACTAGGAATCCTCCAACCAGGCTCCTGTGAT  
AGAGTTCTTTTAAGCCCAAGATTTTTTATTTGAGGGTTTTTTGTTTTTAAAAAAAATTGAACAAAGACTACTA  
ATGACTTTGTTTGAATTATCCACATGAAAATAAAGAGCCATAGTTTCAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 3998**

MPKRGKKGAVAEDGDELRTPEAKKSKTAAKKNDKEAAGEGPALYEDPPDQKTSPSGKPATLKICSWNVDGLRAW  
IKKKGLDWVKEEAPDILCLQETKCSENKLPaelQELPGLSHQYWSAPSDKEGYSGVGLLSRQCPLKVSYGIGDEE  
HDQEGRVIVAEFDSFVLVTAYVPNAGRGLVRLEYRQRWDEAFRKFLKGLASRKPLVLCGDLNVAHEEIDLRNPKG  
NKKNAGFTPQERQGFgELLQAVPLADsFRHLYPNTPYAYTFWTYMMNARSKNVGWRLDYFLLSHSLLPALCDSKI  
RSKALGSDHCPITLYLAL

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**FIGURE 3999**

CAGACAGACCAATCACGCGCATTCTTCGGCCACGACAAGCGCGCCTCTGATCACGTGACCAGGTCCGCTACCCAC  
GTGGGGGCTCAGCGTGACCCCTTCTTTGTGCTCGGGTTAGGAGGAGCTAGGCTGCCATCGGGCCGGTGACAGATAC  
GGGTTGCTCTTTTGTCTATAAGAGGGGCTTCGCTGGCAGTCTGAACGGCAACGCGGTAAAAATATTGCTTCGGT  
GGGTGACGCGGTACAGCTGCCCAAGGGCGTTCGTAACGGGAATGCCGAAGCGTGGGAAAAGGGAGCGGTGGCGG  
AAGACGGGGATGAGCTCAGGACAGAGCCAGAGGCCAAGAAGAGTAAGACGGCCGCAAAGAAAAATGACAAAGAGG  
CAGCAGGAGAGGGGCCAGCCCTGTATGAGGACCCCCAGATCAGAAAACCTCAGCCAGTGGCAAACCTGCCACAC  
TCAAGATCTGCTCTTGGAATGTGGATGGGCTTCGAGCCTGGATTAAGAAGAAAGGATTAGATTGGGTAAAGGAAG  
AAGCCCCAGATATACTGTGCCTTCAAGAGACCAAATGTTTCAGAGAACAACCTACCAGCTGAACCTCAGGAGCTGC  
CTGGACTCTCTCATCAATACTGGTCAGCTCCTTCGGACAAGGAAGGGTACAGTGGCGTGGGCCTGCTTTCCCGCC  
AGTGGCCACTCAAAGTTTCTTACGGCATAGGCGATGAGGAGCATGATCAGGAAGGCCGGGTGATTGTGGCTGAAT  
TTGACTCGTTTGTGCTGGTAACAGCATATGTACCTAATGCAGGCCGAGGTCTGGTACGACTGGAGTACCGGCAGC  
GCTGGGATGAAGCCTTTCGCAAGTTCTGAAGGGCCTGGCTTCCCGAAAGCCCTTGTGCTGTGTGGAGACCTCA  
ATGTGGCACATGAAGAAATTGACCTTCGCAACCCCAAGGGGAACAAAAAGAATGCTGGCTTCAGCCACAAGAGC  
GCCAAGGCTTCGGGGAATTACTGCAGGCTGTGCCACTGGCTGACAGCTTTAGGCACCTCTACCCCAACACACCCT  
ATGCCTACACCTTTTGGACTTATATGATGAATGCTCGATCCAAGAATGTTGGTTGGCGCCTTGATTACTTTTTGT  
TGTCCCACTCTCTGTTACCTGCATTGTGTGACAGCAAGATCCGTTCCAAGGCCCTCGGCAGTGATCACTGTCCTA  
TCACCTATACCTAGCACTGTGACACCACCCCTAAATCACTTTGAGCCTGGGAAATAAGCCCCCTCAACTACCAT  
TCCTTCTTTAAACACTCTTCAGAGAAATCTGCATTCTATTTCTCATGTATAAACTAGGAATCCTCCAACCAGGC  
TCCTGTGATAGAGTTCTTTAAGCCCAAGATTTTTATTTGAGGGTTTTTTGTTTTTAAAAAAAATTGAACAA  
AGACTACTAATGACTTTGTTTGAATTATCCACATGAAAATAAGAGCCATAGTTTCAAAAAAAAAAAAAAAAAA  
A

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**FIGURE 4000**

MPKRGKKGAVAEDGDELRTPEAKKSKTAAKKNDKEAAGEGPALYEDPPDQKTSPSGKPATLKICSWNVDGLRAW  
IKKKGLDWVKEEAPDILCLQETKCSENKLPAELQELPGLSHQYWSAPSDKEGYSGVGLLSRQCPLKVSYGIGDEE  
HDQEGRVIVAEFDSFVLVTAYVPNAGRGLVRLEYRQRWDEAFRFLKGLASRKPLVLCGDLNVAHEEIDLRNPKG  
NKKNAGFTPQERQGFCELLQAVPLADSFRLYPNTPYAYTFWTYMMNARSKNVGWRLDYFLLSHSLLPALCDSKI  
RSKALGSDHCPITLYLAL

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**FIGURE 4001**

CAGACAGACCAATCACGCGCATTCTTCGGCCACGACAAGCGCGCCTCTGATCACGTGACCAGGTCCGCTACCCAC  
GTGGGGGCTCAGCGTGCACCCTTCTTTGTGCTCGGGTTAGGAGGAGCTAGGCTGCCATCGGGCCGGTGCAGATAC  
GGGGTTGCTCTTTTGTCTCATAAGAGGGGCTTCGCTGGCAGTCTGAACGGCAAGCTTGAGCAACGCGGTAAAAATA  
TTGCTTCGGTGGGTGACGCGGTACAGCTGCCCAAGGGCGTTTCGTAACGGGAATGCCGAAGCGTGGGAAAAAGGGA  
GCGGTGGCGGAAGACGGGGATGAGCTCAGGACAGAGCCAGAGGCCAAGAAGAGTAAGACGGCCGCAAAGAAAAAT  
GACAAAGAGGCAGCAGGAGAGGGGCCAGCCCTGTATGAGGACCCCCAGATCAGAAAACCTCACCCAGTGGCAAA  
CCTGCCACACTCAAGATCTGCTCTTGGAATGTGGATGGGCTTCGAGCCTGGATTAAGAAGAAAGGATTAGATTGG  
GTAAAGGAAGAAGCCCCAGATATACTGTGCCTTCAAGAGACCAAATGTTTCAGAGAACAACCTACCAGCTGAACTT  
CAGGAGCTGCCTGGACTCTCTCATCAATACTGGTCAGCTCCTTCGGACAAGGAAGGGTACAGTGGCGTGGGCCTG  
CTTTCCCGCCAGTGGCCACTCAAAGTTTCTTACGGCATAGGCGATGAGGAGCATGATCAGGAAGGCCGGGTGATT  
GTGGCTGAATTTGACTCGTTTGTGCTGGTAACAGCATATGTACCTAATGCAGGCCGAGGTCTGGTACGACTGGAG  
TACCGGCAGCGCTGGGATGAAGCCTTTCGCAAGTTCTGAAGGGCCTGGCTTCCCGAAAGCCCCCTTGTGCTGTGT  
GGAGACCTCAATGTGGCACATGAAGAAATTGACCTTCGCAACCCCCAAGGGGAACAAAAAGAATGCTGGCTTCACG  
CCACAAGAGCGCCAAGGCTTCGGGGAATTACTGCAGGCTGTGCCACTGGCTGACAGCTTTAGGCACCTCTACCCC  
AACACACCCTATGCCTACACCTTTTGACCTTATATGATGAATGCTCGATCCAAGAATGTTGGTTGGCGCCTTGAT  
TACTTTTTGTGTGCCACTCTCTGTACCTGCATTGTGTGACAGCAAGATCCGTTCCAAGGCCCTCGGCAGTGAT  
CACTGTCTATACCCCTATACCTAGCACTGTGACACCCCTAAATCACTTTGAGCCTGGGAAATAAGCCCCCT  
CAACTACCATTCTTCTTTAAACACTCTTCAGAGAAATCTGCATTCTATTTCTCATGTATAAACTAGGAATCCT  
CCAACCAGGCTCCTGTGATAGAGTTCTTTTAAGCCCAAGATTTTTTATTTGAGGGTTTTTTGTTTTTAAAAAAA  
AATTGAACAAAGACTACTAATGACTTTGTTTGAATTATCCACATGAAAATAAAGAGCCATAGTTTCAAAAAAAA  
AAAAA

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**FIGURE 4002**

MPKRGKKGAVAEDGDELRTPEAKKSKTAAKKNDKEAAGEGPALYEDPPDQKTSPSGKPATLKICSWNVDGLRAW  
IKKKGLDWVKEEAPDILCLQETKCSENKLPaelQELPGLSHQYWSAPSDKEGYSGVGLLSRQCPLKVSYGIGDEE  
HDQEGRVIVAEFDSFVLVTAYVPNAGRGLVRLEYRQRWDEAFRKFLKGLASRKPLVLCGDLNVAHEEIDLRNPKG  
NKKNAGFTPQERQGFgELLQAVPLADSFRHLYPNTPYAYTFWTYMMNARSKNVGWRLDYFLLSHSLLPALCDSKI  
RSKALGSDHCPITLYLAL

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**FIGURE 4003**

AGTGCTATCTGCAGGCTGGCCAGCTTCCTCTGCGCTCCGAAAGCTGCGGCCAGCGCGGACTAGTGAGGACCTC  
CACAGCTCCTGACATTGCCAGGAGTCCTGTGCGCGTTTTCTCCAGCCTCCGCCATGCCGCGGTGTGGGTTTT  
GAAGGCAGCGCCAATAAGATTGGCGTGGGCGTGGTGCGGGATGGCAAGGTGCTGGCGAACCCGCGCGGACTTAC  
GTCACGCCTCCTGGCACAGGATTCCCTCCAGGTGATACAGCCAGGCATCACCAGCTGTTATCCTAGACCTGCTG  
CAGGAGGCACTAACAGAGTCTGGATTAACCTCCCAGGATATCGACTGCATTGCATACACCAAGGGCCCTGGCATG  
GGTGCCCCACTGGTTTTCTGTGGCTGTTGTGGCCCGTACTGTGGCCCAACTGTGGAATAAGCCATTGGTGGGTGTG  
AACCCTGTATAGGCCACATTGAGATGGGCGCCTCATCACTGGAGCCACCAGCCCAACCGTGTGTATGTGAGT  
GGAGGAAATACGCAGGTGATTGCATACTCGGAACATCGTTACCGTATCTTTGGGGAAACCATCGATATTGCAGTG  
GGTAATTGTCTGGATCGTTTTGCTCGAGTGTGAAGATTTCTAACGACCCAAGTCCAGGATACAACATTGAACAG  
ATGGCAAAGCGAGGCAAGAAGCTAGTTGAGCTGCCATACACTGTAAAGGGGATGGACGTCTCATTCTCAGGGATC  
CTGTCTTTCATTGAGGATGTAGCCCATCGGATGCTGGCCACAGGCGAGTGTACTCCTGAGGATCTGTGTTTTCTCC  
CTGCAGGAAACTGTGTTTGCAATGCTGGTAGAGATCACAGAGCGAGCCATGGCACATTGTGGCTCCCAGGAGGCC  
CTCATTGTGGGAGGAGTGGGGTGTAAATGTGAGGCTACAGGAGATGATGGCAACAATGTGCCAGGAACGTGGAGCC  
CGGCTTTTTGCTACAGATGAGAGATTCTGTATTGACAATGGAGCGATGATAGCCCAGGCTGGCTGGGAGATGTTT  
CGGGCTGGACACAGGACCCCACTCAGTGATTCTGGGGTTACACAGAGGTATCGGACAGATGAAGTAGAGGTGACC  
TGGAGGGACTTAATAAGATCAACAGAATCAGAGTAGATAGTTCCCTTAATCGGAACCCAAAGGACCCCGTGCCTCAA  
TCTCTATCCTGATGTATGGGAGTCCTAGCAAAGCTATAGACTCCAAGCAAGGCTTGGGGTCCTTTATGGAACCC  
CAGGATGACTCAGCAATAAAATATTTTTGGTTTTTTGGTTTTGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
AAA

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**FIGURE 4004**

MPAVLGFEGSANKIGVGVVRDGVLANPRRTYVTPPGTGFLPGDTARHHRVILDLLQEALTESGLTSQDIDCIA  
YTKGPGMGAPLVSVAVVARTVAQLWNKPLVGVNHCIGHIEMGRLITGATSPTVLYVSGGNTQVIAYSEHRYRIFG  
ETIDIAVGNCLDRFARVLKISNDPSPGYNIEQMAKRGKKLVELPYTVKGMDVSFSGILSFIEDVAHRMLATGECT  
PEDLCFSLQETVFAMLVEITERAMAHCGSQEALIVGGVGCNVRLQEMMATMCQERGARLFATDERFCIDNGAMIA  
QAGWEMFRAGHRTPLSDSGVTQRYRTDEVEVTWRD



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**FIGURE 4005A**

GGAAATCGGACGCCCCAGGCATATACAAGCTGAGTTTCAGCCATGGAAAACTCCATGGGCATGTGTCTGCCCCATC  
CAGACATCCTCTCCTTGGAGAACCGGTGCCTGGCTATGCTCCCTGACTTACAGCCCTTGGAGAACTACATCAGC  
ATGTATCTACCCACTCAGATATCCTCTCCTTGAAGAACCAGTGCCCTAGCCACGCTTCCCTGACCTGAAGACCATGG  
AAAAACCACATGGATATGTGTCTGCCCCACCCAGACATCCTCTCCTTGGAGAACCAGTGCCCTGGCCACACTTTCTG  
ACCTGAAGACCATGGAGAAACCACATGGACATGTTTCTGCCCCACCCAGACATCCTCTCCTTGGAGAACCGGTGCC  
TGGCCACCCCTCTCTAGTCTAAAGAGCACTGTGTCTGCCAGCCCCCTTGTCCAGAGTCTACAGATATCTCACATGA  
CGCAAGCTGATTTGTACCGTGTGAACAACAGCAATTGCCTGCTCTCTGAGCCTCCAAGTTGGAGGGCTCAGCATT  
TCTCTAAGGGACTAGACCTTTCAACCTGCCCTATAGCCCTGAAATCCATCTCTGCCACAGAGACAGCTCAGGAAG  
CAACTTTGGGTCGTTGGTTTGATTGAGAAGAGAAGAAAGGGGCAGAGACCCAAATGCCTTCTTATAGTCTGAGCT  
TGGGAGAGGAGGAGGAGGTGGAGGATCTGGCCGTGAAGCTCACCTCTGGAGACTCTGAATCTCATCCAGAGCCTA  
CTGACCATGTCTTCAGGAAAAGAAGATGGCTCTACTGAGCTTGCTGTGCTCTACTCTGGTCTCAGAAGTAAACA  
TGAACAATACATCTGACCCACCCCTGGCTGCCATTTTTGAAATCTGTCGTGAAGTTGCCCTCCTGGAGCCTGAGT  
TTATCCTCAAGGCATCTTTGTATGCCAGGCAGCAGCTGAACGTCCGGAATGTGGCCAATAACATCTTGGCCATTG  
CTGCTTTCTTGCCGGCGTGTGCCCCACCTGCGACGATATTTCTGTGCCATTGTCCAGCTGCCTTCTGACTGGA  
TCCAGGTGGCTGAGCTTTACCAGAGCCTGGCTGAGGGAGATAAGAATAAGCTGGTGCCCTGCCCGCCTGTCTCC  
GTACTGCCATGACGGACAAATTTGCCAGTTTGACGAGTACCAGCTGGCTAAGTACAACCCCTCGGAAGCACCGGG  
CCAAGAGACACCCCCGCCGGCCACCCCGCTCTCCAGGGATGGAGCCTCCATTTTCTACAGATGTTTTCCAAGGT  
ACATAGGGTTTCTCAGAGAAGAGCAGAGAAAAGTTTGAGAAGGCCGGTGATACAGTGTGAGAGAAAAGAATCCTC  
CAAGGTTACCCCTGAAGAAGCTGGTTCAGCGACTGCACATCCACAAGCCTGCCAGCAGCTTCAAGCCCTGCTGG  
GTTACAGATACCCCTCCAACCTACAGCTCTTTTCTCGAAGTCGCCTTCTGGGCCTTGGGATTCTAGCAGAGCTG  
GGAAGAGGATGAAGCTGTCTAGGCCAGAGACCTGGGAGCGGGAGCTGAGCCTACGGGGGAACAAAGCGTCGGTCT  
GGGAGGAACCTATTGAAAATGGGAAGCTTCCCTTCATGGCCATGCTTCGGAACCTGTGCAACCTGCTGCGGGTTG  
GAATCAGTTCCCGCCACCATGAGCTCATTCTCCAGAGACTCCAGCATGCGAAGTCGGTGATCCACAGTCGGCAGT  
TTCCATTAGATTCTTAACGCCCATGATGCCATTGATGCCCTCGAGGCTCAACTCAGAAATCAAGCATTGCCCT  
TTCCTTCGAATATAACACTGATGAGGCGGATACTAAGTAGAAATGAAAAGAACCGTCCCAGGCGGAGGTTTCTTT  
GCCACCTAAGCCGTCAGCAGCTTCGGATGGCAATGAGGATACCTGTGTTGTATGAGCAGCTCAAGAGGGAGAAGC  
TGAGAGTACACAAGGCCAGACAGTGGAAATATGATGGTGAGATGCTGAACAGGTACCGACAGGCCCTAGAGACAG  
CTGTGAACCTCTCTGTGAAGCACAGCCTGCCCTGCTGCCAGGCCGCACTGTCTTGGTCTATCTGACAGATGCTA  
ATGCAGACAGGCTCTGTCCAAAGGCAACCCACAAGGGCCCCCGCTGAACTATGCACTGCTGTTGATTGGGATGA  
TGATCACGAGGGCGGAGCAGGTGGACGTCGTGCTGTGTGGAGGTGACACTCTGAAGACTGCAGTGCTTAAGGCAG  
AAGAAGGCATCCTGAAGACTGCCATCAAGCTCCAGGCTCAAGTCCAGGAGTTTGATGAAAATGATGGATGGTCCC  
TGAATACTTTTGGGAAATACCTGCTGTCTCTGGCTGGCCAAAGGGTTCCTGTGGACAGGGTCATCCTCCTTGGCC  
AAAGCATGGATGATGGAATGATAAATGTGGCCAAACAGCTTTACTGGCAGCGTGTAATTCCAAGTGCCTCTTTG  
TTGGTATCCTCCTAAGAAGGGTACAATACCTGTCAACAGATTGTAATCCCAATGATGTGACACTCTCAGGCTGTA  
CTGATGCGATACTGAAGTTTATTGCAGAGCATGGGGCCTCCCATCTTCTGGAACATGTGGGCCAAATGGACAAAA  
TATTCAAGATTCCACCACCCCCAGGAAAGACAGGGGTCCAGTCTCTCCGGCCACTGGAAGAGGACACTCCAAGCC  
CCTTGGCTCCTGTTTCCAGCAAGGATGGCGCAGCATCCGGCTTTTCAATTCATCCACTTTCCGAGACATGCATG  
GGGAGCGGGACCTGCTGCTGAGGTCTGTGCTGCCAGCACTGCAGGCCGAGCGGGCCCTCACCGTATCAGCCTTC  
ACGGAATCGACCTCCGCTGGGGCGTCACTGAGGAGGAGACCCGTAGGAACAGACAAGTGAAGTGTGCCTTGGGG  
AGGTGGAGAACGCACAGCTGTTTGTGGGGATTCTGGGCTCCCGTTATGGATACATTCCCCCAGCTACAACCTTC  
CTGACCATCCACACTTCCACTGGGCCAGCAGTACCTTCAGGGCGCTCTGTGACAGAGATGGAGGTGATGCAGT  
TCCTGAACCGGAACCAACGTCTGCAGCCCTCTGCCCAAGCTCTCATCTACTTCCGGGATTCCAGCTTCTCTCAGCT  
CTGTGCCAGATGCCTGGAATCTGACTTTGTTTCTGAGTCTGAAGAGGCCGACGTCGGATCTCAGAAGTGAAGA  
GCTACCTAAGCAGACAGAAAGGGATCACCTGCCGAGATACCCCTGTGAGTGGGGGGGTGTGGCAGCTGGCCGGC  
CCTATGTTGGCGGGCTGGAGGAGTTTGGGCAGTTGGTTCTGCAGGATGTATGGAATATGATCCAGAAGCTCTACC  
TGCAGCCTGGGGCCCTGCTGGAGCAGCCAGTGTCCATCCAGACGATGACTTGGTCCAGGCCACCTTCCAGCAGC  
TGCAGAAGCCACCGAGTCTGCCCGGCCACGCCTTCTCAGGACACAGTGCAACGGCTGATGTGCCCCACGGAA  
GGCTGAGCCTGGTGACGGGGCAGTCAGGACAGGGCAAGACAGCCTTCTTGGCATCTCTTGTGTGAGCCCTGCAGG

**FIGURE 4005B**

[illegible]

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**FIGURE 4005C**

TGGCCAAAGCAGATTTGAAGTTACTTTGTCATGAAGCCAGGGGATGCTCCATCTGAAATCTGGAGCAGCTATACAG  
AAAATCCTATGATATTGTCCACCCACAAGGAGTATGGCATATTTGTCTGCAGCCCAAGGATCCTGGAGTTCTTT  
CTTTCTTGAGGCAAAAGGAATCAGGAGAGTTTGAAGAGAGGCTGAACTTTGATATAAACTTAGAGAATCCTAGTA  
GGACCCTAATATCGATAACTCAAGCCAAACCTGAATCTGAGTCCTCATTITTTGTGTGCCAGCTCTGATGGGATCC  
TATGGAACCTGGCCAAATGCAGCCCAGAAGGAGAATGGACCACAGGTAACATGTGGCAGAAAAAGCAAACACTC  
CAGAAACCCAAACTCCAGGGACAGACCCATCTACCTGCAGGGAACTCTGATGCCAGCATGGATAGTGATGCCAGCA  
TGGATAGTGAGCCAACACCACATCTAAAGACACGGCAGCGTAGAAAAGATTCACTCGGGCTCTGTACAGCCCTCC  
ATGTGCTACCTGAGTTGCTGGTGACAGCTTCGAAGGACAGAGATGTTAAGCTATGGGAGAGACCCAGTATGCAGC  
TGCTGGGCCTGTTCCGATGCGAAGGGTCAGTGAGCTGCCTGGAACCTTGGCTGGGCGCTAACTCCACCCTGCAGC  
TTGCCGTGGGAGACGTGCAGGGCAATGTGTACTTTCTGAATTGGGAATGAAGATGTGCCACTCGGGAATAATGAT  
ACCCCTTGTGCTAGAGATGCAAAGCCTGAAGACACTGGTAGCTTTTAATAATTATAAAATTAATAATTTCTTGAT  
AATTATAAAAAATGAAGTGTCAAAAAATCTCAAGTGTAGGCCTGCCTGTGTTCTCATGTGGATTTAGAACAGGAGG  
ATATTCTATGTGTATGTATATGTACATTCTAATGTGTGTCTCTTCTTATTCAACATTAATCCTTACTAGAACCAC  
AAGAAAGTGAATGAAATCTTTAGTAGGTACTCTTTTGAAACTAGGTTTTAGAATTCTTGCACTACTCGCGGGCCC  
TAGGACCCTAGGATGCCATTCTTGCCAGGAGGAGGAATGAGAGTGATGTTGGCCAACATTCAATTTGAACAGAGC  
ATGGAAGACCTTTCAGTTTCATCGGGAAGAATGAGGGAGGGAGAATAAGTCAGTCATGCATCAGGGCATTTAGAA  
AGAGCTATGTTTCTGTACAGAGACAGCCCTTTTCTCAGAACTACCCAGAGGAGGCCGGGCATGGTGGCTCACGC  
TTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCAGATCACGAGGTCAGGAGATCAAGACCATCCTGGCTAACA  
TAGTGAAACCTGTCTCTACTAAAAAATACAAAAAGTTAGCCAGG

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**FIGURE 4006**

GGGGCTCCACTTTCTTTCCCTCTCCGTTTTGGTGGGCTGGTTGGAGATGAAATCCACTGAGGAGGGAAGTCCAGC  
ACCCTGTGTGCCAGTCCCTGAACCTGCCCCATCTGTAGACCCCCTGAAAATCATATGGGCTTGGATTGGATATTCT  
CAACAGAAAGGGTTAAAGGCTGATGGTACCTAAAGCCTGGTACTTGAATTTTGATCAAGATAAGCTGCCTTAAGT  
TCTCTTCATTACACAAATGATCCTAGATAATTGATAGATCCTGTGGTTCAACTGGATTTCTAGATAGAAGCTGGA  
TTCATGTGATGCCAGAGGAGTAAATTTCAAGAGACTGAAACCAGATCTGAGTTTCGCTGTTCCAGTCTGGACCT  
CTTTGGAGCTGTAAATCCTGGATATACTGTAGATGAGTACTGCGTTTTCTTTTATGGACTCTCTTCAGCTTCTG  
GAGACCTCACTATCCTATTATGTCCTTTGTGTGAAGACATGCTGCTTTGTAATTATCGAAAGTGTGCGATCAAAC  
CTCTGGCTATGCAATGGGTCCTGCTCTCACATCTTCTGTGATCAGCATGGCAGTGGTGAGTTTAGTCGCTC  
ACCAGCTATCTGCTGCTGCAACAGTACCCTTTCTGGAAAGCTAGATATTGTCCGCACAGAACTCAGTCCATC  
AGAGGAATATAAAGCTATGGTATTGGCAGGACTGCGACCAGAGATCGTGTGGACATTAGCTCCCGAGCGCTGGC  
CTTCTGGACATATCAGGTACATCAGGAACGTCTCTATCAAGAATACAATTTAGCAAGGCTGAGGGCCATCTGAA  
ACAGATGGAGAAGATATATACTCAGCAAATACAAAGCAAGGATGTAGAATTGACCTCTATGAAAGGGGAGGTTAC  
CTCCATGAAGAAAGTACTAGAAGAATACAAGAAAAGTTCAGTGACATCTCTGAGAACTTATGGAGCGCAATCG  
TCAGTATCAAAAGCTCCAAGGCCTCTATGATAGCCTTAGGCTACGAAACATCACTATTGCTAACCATGAAGGCAC  
CCTTGAACCATCCATGATTGCACAGTCTGGTGTCTTTGGCTTCCCATAGGTAACAACCTCCAAGTTTCTTTGGA  
TAATACACCTGTTTCGAAATCGGGGCGATGGAGATGGAGATTTTCAGTTCAGACCATTTTTTGCGGGTTCTCCAC  
AGCACCTGAACCCAGCAACAGCTTTTTTAGTTTTGTCTCTCAAGTCGTGAATTAGAGCAGCAGCAAGTTTCTAG  
CAGGGCCTTCAAAGTAAAAAGAATTTGAGCCACGCATAGTGTACGCACCTGTGATCCCAGCTACTTAGGAGGTT  
GAGGCTGGGAGGATCACTTGAGCCCAGGAGTCTGAGGCTTTAGTGATCTAAGATCATGCCACTGCACTCCAGCCT  
GGGCAACAGAGTGAGACCCTGTTTCTAAAAAAAATAAAGATAATTTAGCTAACTTCAAAAAAAAAAAAAAAAAA  
AAC

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**FIGURE 4007**

MSLCEDMLLCNYRKCRILSGYAWVTACSHIFCDQHGSGEFSRSPAICPACNSTLSGKLDIVRTELSPSEEEKAM  
VLAGLRPEIVLDISSRALAFWTYQVHQERLYQEYNFSKAEGHLKQMEKIYTQQIQSKDVELTSMKGEVTSMKKVL  
EEYKKKFSDISEKLMERNRQYQKLQGLYDSLRLRNITIANHEGTLEPSMIAQSGVLGFPLGNNSKFPLDNTPVN  
RGDGDGDFQFRPFFAGSPTAPEPSNSFFSFVSPSRELEQQQVSSRAFKVKRI

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**FIGURE 4008**

GAGTGGCCGGGAGATGATGGCTGATGAAGAGGAAGAAGTCAAGCCGATCTTGAGAAATTGCAGGAACCTCGTGGA  
TCAGCTCTACTCATTTCGAGACTGCTATTTTCGAGACACATAGTGTGAGGATGCTGGGAGGAAGCAACAGGATGT  
GCAGAAGGAGATGGAGAAAAACCTACAGCAGATGGAAGAAGTAGTGGGTTCGTCCAGGGCAAGGCACAAGTTCT  
AATGCTAACTGGGAAAGCACTAAATGTGACTCCTGACTATAGCCCTAAGGCTGAGGAGCTTCTGTCAAAGGCTGT  
GAAGCTGGAGCCCGAGCTGGTGGAAAGCCTGGAACCAGCTGGGTGAGGTGTACTGGAAAAAGGGGATGTTGCAGC  
TGCCACACCTGCTTCTCAGGAGCCCTCACCCATTGCAGGAACAAAGTCTCCTTGCAAAACCTGTCAATGGTGCT  
TCGTACAGCTGCGGACTGACACTGAAGATGAACATTCTCACCATTGTCATGGACAGTGTCCGACAGGCTAAGTTGGC  
TGTTTCAGATGGATGTCCATGATGGCCGCTCCTGGTATATTCTTGGGAATTCATATCTTTCCCTTTACTTCTCTAC  
TGGCCAGAACCCTAAGATCTCCAGCAAGCCCTCAGTGCCTATGCCCAAGCAGAGAAAGTTGACAGAAAAGCTTC  
TAGCAATCCTGACCTTCATCTGAACAGGGCGACGTTGCATAAATATGAAGAGAGTTATGGGGAGGCCCTGGAGGG  
CTTCTCTCGGGCTGCAGCCCTGGACCTGCCTGGCCAGAGCCCCGGCAACGAGAGCAACAACCTTCTGGAATTCT  
GGATAGATTAACCAGCCTCCTTGAGAGTAAGGGAAAGGTGAAGACCAAAAAGCTGCAGAGCATGCTGGGAAGCTT  
GCGCCAGCCCATCTAGGCCCTTGACGTGATGGGCACTATCAGTCAGCCTCTGGGCAGAAAGTGACCCTGGAGCT  
CAAGCCACTGAGTACGCTTCAGCCTGGGGTGAACAGCGGTGCCGTCATCCTGGGAAAGGTGGTATTTAGCCTCAC  
CACAGAGGAGAAAGTCCCCTTTACATTTGGCCTGGTAGATTAGATGGACCTTGCTATGCAGTGTGGTGTACAA  
TATAGTGCAGAGCTGGGGAGTGCTCATTGGAGACTCTGTAGCCATTCTGAGCCCAACCTGCGGCTTCACCGAAT  
TCAGCACAAAGGAAAGGACTATTCTTTTCCAGTGTTGAGTGGAGACGCCCCCTCTGCTAGTGGTGAATGGGAA  
GCCTCAGGGATCCAGCAGCCAGGCTGTTGCCACAGTGGCATCGCGACCACAGTGTGAATGACCTTTGACTTGCAT  
GCTCAACAGGGAGTGGAGGAGAGGAGACAAGGCTCTGGACAGCCGGTCCAGCCACATCCAGTGATTCAGCAGGGA  
TGGGAGGAATGTTTTAAATGAAGACTTTCTCTTTCCCTGCCTGTATTACACTTCGTATCTCTTCTCTCTCTCTG  
TCCTCATCATGTTCCAGCTCTCTACAGGGCCACATACTCTTCTGGCATATCTCTCTCTCTCTCTCTCTCTCTCT  
TATGTTTTAAGCAAAGAGCATGGAATTGGTAGAAGTCTTGGGATCTTGCCATGGGACAGAGTCCCCAAGGTTCT  
GTTGTTGCCTCCTTCCTAAGCCTCATATGTATATATCAGTTCAGTATTTATTGCTAAAGGAGGGGGCTTAATTTT  
GTAATGGCTTTTATTTTTAGCAATTTTTATTTTTATTTTTGAACCTTAGGTCCTTCCTCTCTTTGGGGCTGGAA  
CAGAATTAAATTTGTTTGG

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**FIGURE 4009**

MMADEEEEEVKPILQKLQELVDQLYSFRDCYFETHSVEDAGRKQQDVQKEMEKTLLQMEEVVGSVQGKAQVLMLTG  
KALNVTPDYSKAEELLSKAVKLEPELVEAWNQLGEVYWKKGDVAAAHTCFSGALTHCRNKVSLQNLMSVLRQLR  
TDTEDEHSHHVMDSVRQAKLAVQMDVHDGRSWYILGNSYLSLYFSTGQNPKISQQALSAYAQAQEKVDRKASSNPD  
LHLNRATLHKYEEESYGEALEGFSRAAALDPAWPEPRQREQQLLEFLDRLTSLLESKGKVKTKKLQSMLGSLRPAH  
LGPCSDGHYQSASGQKVTLELKPLSTLQPGVNSGAVILGKVVFSLTTEEKVPFTFGLVDSGPGCYAVMVYNIVQS  
WGVLLIGDSVAIPEPNLRLHRIQHKGDYSFSSVRVETPLLLVVNGKPQGSSSQAVATVASRPQCE

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**FIGURE 4010**

GCTGCTCTCCTGATCATGGCTTCTCCGAGTTCTTTACCTACTATTGCCCTCCATCTTCCTCCCCGCTCTGGTCA  
GAGCCGCTGTACAGTCTGAGGCCCCGAGCACGCGCGAGAGCGGTTGCAGGACGACTCGGTGGAAACAGTCACGTCC  
ATAGAACAGGCAAAAGTAGAAGAAAAGATCCAAGAGGTCTTCAGTTCTTACAAGTTCAACCACCTTGTACCAAGG  
CTTGTTTTGTCAGAGGGGAGAAGCACTTCCATTATCTGAAAAGAGGCCCTTCGACAACCTGACAGATGCCTATGAGTGT  
CTGGATGCCAGCCGCCCATGGCTCTGCTATTGGATCCTGCACAGCTTGGAAGTGTAGATGAACCCATCCCCAG  
ATAGTGGCTACAGATGTGTGTCAGTTCTGGAGCTGTGTGTCAGAGCCCAGAAGGTGGCTTTGGAGGAGGACCCGGT  
CAGTATCCACACCTTGCACCCACATATGCAGCAGTCAATGCATTGTGCATCATTGGCACCGAGGAGGCCATGAC  
ATCATTAAACAGAGAGAAGCTTCTTCAGTATTTGTACTCCCTGAAGCAACCTGACGGCTCCTTTCTCATGCATGTC  
GGAGGTGAGGTGGATGTGAGAAGCGCATACTGTGCTGCCCTCCGTAGCCTCGCTGACCAACATCATCACTCCAGAC  
CTCTTTGAGGGCACTGCTGAATGGATAGCAAGGTGTGAGAAGTGGGAGGTGGCATTGGCGGGGTACCAGGGATG  
GAAGCCCATGGTGGCTATACCTTCTGTGGCCTGGCCGCGCTGGTAATCCTCAAGAGGGAAACGTTTCTTGAACCTG  
AAGAGCTTATTACAATGGGTGACAAGCCGGCAGATGCGATTTGAAGGAGGATTTAGGGCCGCTGCAACAAGCTG  
GTGGATGGCTGCTACTCCTTCTGGCAGGCGGGGCTCTGCCCTGCTCCACCGCGCACTGCACGCCAAGGTGAC  
CCTGCCCTTAGCATGAGCCACTGGATGTTCCATCAGCAGGCCCTGCAGGAGTACATCCTGATGTGCTGCCAGTGC  
CCTGCGGGGGGGCTTCTGGATAAACCTGGCAAGTCGCGTGATTTCTACCACACCTGCTACTGCCTGAGCGGCCTG  
TCCATAGCCCAGCACTTCGGCAGCGGAGCCATGTTGCATGATGTGGTCCTGGGTGTGCCCGAAAACGCTCTGCAG  
CCCACTCACCCAGTGTACAACATTGGACCAGACAAGGTGATCCAGGCCACTACATACCTTCTACAGAAGCCAGTC  
CCAGGTTTTGAGGAGCTTAAGGATGAGACATCGGCAGAGCCTGCAACCGACTAGAGGACCTGGGTCCCGGCAGCT  
CTTGCTCACCCATCTCCCCAGTCAGACAAGGTTTATACGTTTCAATACATACTGCATTCTGTGCTACACAAGCC  
TAGCCTCAGTGGAGCTGTGGTTCTCTTGGTACTTTCTTGTCAAAACAAAACCAATGGCTCTGGGTTTGGAGAACA  
CAGTGGCTGGTTTTAAAAATTCTTTCCACACCTGTCAAACCAAAAATCTATCAGCCACGTGGTGTGGTTGGTGA  
ACAGTGCATGCCAGGAGGAAGCAGTCCCTCCTCACCAGCTCTCCAGCCAGGACGATCACACAGAGATGAATGGCA  
TCTGAGTATTACGGCATCCAGAGCCACTGCTGACTCCCCTTGACGCCACCATTAGTCACCAGACTGGGTGCC  
CTCCGATGGGTGGAATAAGTCTGCTTCATGCCAAGGCTGGGCTTTGGGTCCCACCAAGATGAGTTCTCTGTAAGA  
CTGTGGTGGAGTTGCACCAGGAGGTGCCTCTGCCTCTCGACTTGACCCCTGGTCATTTGTAAGGGAAAAGAGCTG  
GAGGTGGGGAGAGAAAGATCTCCTCAGTTGGGAGTCCTTCCACTTCAACACTGGAGAACTGAGCCTTGCATCTC  
TCCAGGGTCCAAGGCCACGCTTGGTGACAGGCAAGACTTGCTTCAGCCCCAGGTGTGGTGACTTAGACCTAGGA  
AACCAATTATGAGTGGAAAGTGACCTCTAGTTCAACTGTGCCAGAGGAAACAGCCCTCCAGTCCCCACCTGCCT  
CACTCCTCCCTATCATGTACCGTGAAAACCCCTCTGATGGCTCAAGGCAGTGCTGCAGGCCGAGGCCCTTCT  
GGGGGTTTCTATCTTTCTTCCACCAGACTCCAAGCCACTCTCCTCCAAGACTGTGTTGTCTTTCTCACCAAGA  
GTATTAACACTACTAAGTCTTTCACCTTAACCTTATGACTCAGGATTTATTCAGTCTCTGCCACTCTAGGCTCAC  
AGGAATAAAATCAAGTGCTAGACACACTGGCTGCTACTAAGGCACTAGCCTCTGTAGCTGGTGGTGGCAGCGTGG  
GGTGCCGCCAGCGTGTGGTCTGGCAGTGCCTCTGCTGTGCTGCACATTGAGCCCTTTCTCAGTCAGTGGAG  
TATCAAGTTGGGCCATCTGTCTACTGACCTGGCCTTCATGTAAGCAGCTGTGGGCTGCGGGCAGACAGGAGCTCA  
GAGATGCAGCATGAGGCGCTTAGAAAAACCTGGCCATTGTGCTCCTTAATTCCTTTTGCTTTGCCATATTGGG  
CTATGTATTACCTCCTTGAAATAATAAAAGAATAACATTTTCAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 4011**

MASPSSFTYYCPPSSSPVWSEPLYSLRPEHARERLQDDSVETVTSIEQAKVEEKIQEVFSSYKFNHLVPRLVLQR  
EKHFHYLKRGLRQLTDAYECLDASRPWLCYWILHSLELLDEPIQIVATDVCQFLELCQSPEGGFGGGPGQYPHL  
APTYAAVNALCIIGTEEAYDIINREKLLQYLYSLKQPDGSFLMHVGGEVDVRSAYCAASVASLTNIITPDLFEGT  
AEWIARCQNWEGGIGGVPGMEAHGGYTFCGLAALVILKRERSLNLSLLQWVTSRQMRFEAGGFQGRCNKLVDGCY  
SFWQAGLLPLLHRALHAQGDPAISMSHWMFHQQALQEYILMCCQCPAGGLLDKPGKSRDFYHTCYCLSGLSIAQH  
FGSGAMLHDVVLGVPENALQPTHEPVYNIGPDKVIQATTYFLQKPVPGFEELKDETSAEPATD

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**FIGURE 4012**

CGGCCTCTCTGCGGGGCTCACTCTGCGCTTCACCAATGGCTTTCATTGCCAAGTCCTTCTATGACCTCAGTGCCAT  
CAGCCTGGATGGGGAGAAGGTAGATTCAATACGTTCCGGGGCAGGGCCGTGCTGATTGAGAATGTGGCTTCGCT  
CTGAGGCACAACCACCCGGGACTTCACCCAGCTCAACGAGCTGCAATGCCGCTTTCCCAGGCGCCTGGTGGTCCT  
TGGCTTCCCTTGCAACCAATTTGGACATCAGGAGAACTGTCAGAATGAGGAGATCCTGAACAGTCTCAAGTATGT  
CCGTCCTGGGGGTGGATACCAGCCCACCTTCACCCTTGTCAAAAATGTGAGGTGAATGGGCAGAACGAGCATCC  
TGTCTTCGCCTACCTGAAGGACAAGCTCCCTACCTTATGATGACCCATTTTCCCTCATGACCGATCCCAAGCT  
CATCATTTGGAGCCCTGTGCGCCGCTCAGATGTGGCCTGGAACTTTGAGAAGTTCCTCATAGGGCCGGAGGGAGA  
GCCCTTCCGACGCTACAGCCGCACCTTCCCAACCATCAACATTGAGCCTGACATCAAGCGCCTCCTTAAAGTTGC  
CATATAGATGTGAACTGCTCAACACACAGATCTCCTACTCCATCCAGTCCTGAGGAGCCTTAGGATGCAGCATGC  
CTTCAGGAGACACTGCTGGACCTCAGCATTCCCTTGATATCAGTCCCCTTCACTGCAGAGCCTTGCCCTTCCCCCT  
CTGCCGTGTTTCCTTTTCCCTCTCCCAACCCTCTGGTTGGTGATTCAACTTGGGCTCCAAGACTTGGGTAAGCTCTG  
GGCCTTCACAGAATGATGGCACCTTCCTAAACCCTCATGGGTGGTGTCTGAGAGGCGTGAAGGGCCTGGAGCCAC  
TCTGCTAGAAGAGACCAATAAAGGGCAGGTGTGGAAACGGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4013**

MAFIAKSFYDLSAISLDGEKVDFNTFRGRAVLLRMWLRSEGTITRDFTQLNELQCRFPRLVVLGFPCNQFGHQE  
NCQNEEILNSLKYVRPGGGYQPTFTLVQKCEVNGQNEHPVFAYLKDKLPYPYDDPFSLMTDPKLIWSPVRRSDV  
AWNFEKFLIGPEGEPPFRYSRTFPTINIEPDIKRLKVAI

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**FIGURE 4014A**

GTTTGATATCTACACTCAGTATTGCAACAATTACCCCAACTCCGTGGCCGCCCTGACGGAATGCATGCGGGACAA  
GCAGCAGGCCAAGTTCTTTTCGGGACCGGCAGGAGCTGCTACAGCACTCGCTGCCCTTGGGCTCCTACCTGCTGAA  
GCCAGTCCAGCGCATCTCAAGTACCACCTGCTGCTCCAGGAAATTGCCAAGCATTTTGATGAAGAAGAGGATGG  
CTTTGAGGTGGTGGAGGATGCCATTGACACCATGACCTGTGTGGCCTGGTACATCAACGACATGAAGAGGAGGCA  
TGAGCACGCGGTCCGGCTCCAGGAGATTCACTCACTCCTCATCAACTGGAAGGGGCCCCGACCTGACCACCTACGG  
GGAGCTTGTCTGGAGGGCACATTCCGCGTGCATCGCTGCGCAATGAAAGGACCTTTTTCTCTTTTGACAAAAC  
ACTGCTTATCACCAAGAAGCGGGGCGATCACTTTGTCTACAAGGGCAACATCCCGGTAACCAGGCCCTGCCCCAT  
CTCCTCTGCCATCTTCTCTCCTTCCCAAAGGATCTGGGTCCCCCTTCTTGTCTGCTTCTTGGGGCTCCAGACCA  
CCCTTCTGAGATCACCTCCCTGCTTCCCCAGGCTGTCAACCTTGTGCTTGACTGTCTTTCCCTCTGCCCCCTAG  
TGCTCTCCCTGATGCTGATCGAAAGCACCAGAGACTCCCTGTGCTTCACTGTCAACCACTACAAGCACAGCAAG  
CAGCAGTACAGCATCCAGGCCAAGACAGTGGAGGAGAAACGGAAGTGGACTCACCACATCAAGAGGCTCATCCTA  
GAGAACCAACATGCCACCATTTCCCAGAGGCCAAGGAAGCCATCTTGGAAATGGATTCTTATTATCCCAATCGG  
TACCGCTGCAGCCCAGAGCGGCTGAAGAAGGCTTGGTCTCCAGGATGAGGTGTCCACCAATGTGCGCCAGGGG  
CGCCGGCAATCTGAGCCAACCAACACCTGCTCAGGCAACTCAACGAGAAAGGTGAGTGTGTGAGGTGGCCAGCC  
ATTCCAGTGAGCGGGGAGGAGGAGGGAGGGGAAGCAGCCGACAACCTGGGGTGTGACCTGAGGGTGGAGG  
ATTGTGAGAATAGTGTAGAGGGAACCTCTGCCTCCATTCCCCCAGAGAGGGCTCGCCCCCTGGCTGGCTGAGGA  
GAGGGGCTGGAGCTCTCCCCATGCACAGGCTCATGCCCTTTCCTCCGGAACAATGAGAGCCGAGCAACAGGC  
ACAGACCTGCGCTGCTCTGTGGCCCCCTGGGCCCCCTGCTCTGTCACTCATTCTTTGAAAGCCCAGGAGACTAGGT  
GAGGGTCTGGGAGCAGGAGCCCCAGTGAGGACTTCCCCAGGGAGCTGTCCAGAGGTCTTTTTCTGCTTACTG  
ATCTCTTCCCCCTCCCCCTCCCCCTGCCCCCTGCCCCGTGTGCTGGGGGACCCGGTGGTGATGTCTGCAGCCCAGCAG  
CAGGAATGAAGGGAAAGGGGCGCAGGGAGTCTGAAAGCTCCAGGAGCAGCAGAAGGCCAGTGCCCGGTCTCCAA  
CCAGTACTGAGAAGCGCATGAGCTTCGAGTCCATTTCTTCCCTGCCAGAGGTTGAGCCGGACCCCTGAGGCTGGGA  
GTGAGCAAGAGGTATTTCTGCTGTGGAAGGGCCAGTGCCGAGGAGACGCCCTCAGACACAGAAATCTCCAGAAG  
TCCTGGAGACACAGCTTGATGCCCCACCAGGGCCTTCTGGGGATGGACCCCCCAGGTGACATGGTGGACTTCGTGG  
CAGCTGAGAGCACTGAGGACCTTAAGGCCCTGAGCAGCGAGGAGGAAGAAGAAATGGGAGGTGCCGCCAGGAGC  
CTGAGAGCCTTCTGCCACCCCTCTGTGCTGGACCAGGCCAGCGTCATTGCGGAGCGATTGTGTCAGCAGCTTCTCTC  
GGCGGAGCAGCGTGGCACAGGAGGACAGCAAGTCCAGTGGCTTTGGGAGCCCGCGGCTGGTCAGCCGGAGCAGCA  
GCGTGCTCAGCCTGGAGGGCAGCGAGAAGGGCCTGGCCCGGCATGGCAGTGCCACAGACTCCCTCAGCTGTGAGC  
TCTCCCCAGAAGTGGACATCAGTGTGGGGTGGCCACAGAGGACAGCCCTTCTGTCAATGGGATGGAGCCCCCAA  
GCCCAGGCTGCCAGTGGAGCCTGACCGGTCTTCTGCAAGAAGAAGGAATCAGCACTCTCCACCCGAGACCGGC  
TGTTGCTAGACAAGATTAGAGCTATTATGAAAATGCAGAACACCATGATGCAGGCTTCAGCGTCCGTCGCCGGG  
AGAGCCTCTCTACATCCCCAAAGGACTGGTAAGAACTCCATCTCCAGGTTCAACAGCCTTCCCCGGCCAGACC  
CAGAGCCAGTACCTCCAGTGGGGAGCAAGAGACAGGTGGGCTCCCGGCCGACTTCGTGGGCCCTGTTTGAGCTCC  
CAGGACCAAGCCAGGCAGTCAAAGGGGACCCACCTCCCATCTCAGATGCTGAGTTCCGCCCATCTTCAGAAATTG  
TGAAGATCTGGGAGGGAATGGAGTCTTCCGGAGGGAGCCCTGGGAAGGGGCCAGGCCAGGGCCAGGCCAATGGCT  
TTGACCTGCATGAGCACTCTTCATCTTGGAGGAGCATGAGCTGGGAGCCATCACAGAGGAGTCGGCCACTGCCT  
CCCCGGAAGCTCCTCTCCCACTGAGGGGCGCAGCCCGGCCACCTGGCCCGGGAGCTGAAAGAGCTGGTGAAGG  
AGCTGAGCAGCAGTACCCAGGGGGAGCTGGTGGCCCCACTGCACCCCGCATCGTGCAGCTCTCCACGTAATGG  
ACAGCCACGTGAGCGAGCGGTCAAGAACAAGGTCTACCAGCTGGCCCGCCAGTACAGCCTCCGGATCAAGAGCA  
ACAAGCCAGTGATGGCCAGGCCACCACTGCAGTGGGAAAAGGTGGCCCCCTGAGAGGGATGGGAAGAGCCCCACTG  
TGCCCTGTCTACAGGAAGAGGCTGGAGAGCCATTAGGTGGCAAAGGTAAGAGGAAGCCGGTGTCTGTCTATTGG  
ACTATGAGCAGCTGATGGCCAGGAGCACAGCCCTCCCAAGCCCTCCTCGGCTGGGGAGATGTACACACAGCGTT  
TCTTCTTCAACCCGTCTGTCTGTCAGCCAGAGGACCACCTCGCCTGGGGGCGGCCCTCCGCCCGGAGCCCCCTCA  
GCCCCACAGAGACCTTCAGCTGGCCCGACGTCCGTGAGCTCTGCTCCAAGTATGCTTCCCGCATGAGGACAGCC  
GAGCAGGGGGCGGCCCGGCCCGGCCACCCGTCAACAGGAGCCACTCGGTGCCGAGAACATGGTAGAGCCAC  
CTCTGTGGGGCAGGGTGGGCCGCTGCCGACGCTGAGCACCAAGAGGGGCGGGGAGCGGAGAGGCTGCCAAAT  
CCCCTGGGCCCTTGCCCCAGAGCAAGCCGGATGGAGGCGAGACCCTGTATGTCACTGCAGACCTCACCTGGAGG  
ACAACCGCGGGGTGATTGTATGGAGAAGGGACCCCTTCCAGCCCCACTGCAGGGCTGGAGGAGAGCAGTGGCC

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**FIGURE 4014B**

AGGGACCAAGCTCACCGGTGGCCCTGCTGGGGCAGGTTTCAGGACTTCCAGCAGTCTGCAGAGTGCCAGCCGAAGG  
AAGAGGGTTCCAGGGACCCGGCAGACCCGAGCCAGCAGGGCAGAGTGAGAAACCTTAGAGAGAAGTTCCAGGCCT  
TGAACCTCTGTCGGTTGATGCTGACTCCTGGGGGAGGGAGGAGTCATGTTGGAGGTTGGGGAAGAACCTGGGCATC  
CTTCCCTCAAGCCTGGGCTCATGGAGCCCTGCCCAGGGCCCTCAGGTGGGCGGAAAGTCCATCCCTCCGCC  
TTCAGGAAGGATGCTCCCGTGTGCAGGGGTCTCCTGCCTGTGCCATCCACTGGGGCTCGAGACAATTCCCACTC  
ACCTGTGAGGCCGGTGTGGCTGCTTCCCTTGTAATAGTTGTTCTCTGGTAAGAAGCCAAATATTTAAGCTCACT  
TCTTCCCAGAGAGAGGAAGCTCTGCTCAGGCCTCCAGCGTTGGCTGGCCATGGCCACAGCCAGATGGAGGAGCCC  
ATCCCCAGGAGACTCAGGCAGTGGCCTGGAGAGGCTTTGTTCTGTAACGGTGCTTTTCTTAGGGTCCAGGCAGG  
AATGAAGCCAATAATTTATTGCTTTCCATTCTGTGGTATGATGTGCGTGTGCGTGAGTGTGTGGCCCTGTTTAT  
TCCCTCCTGTCAAGAATGAAGTGGATTCAAGTCAGGTACTTTGAGGGTTGTTGTGCTGACCTGTGGTTGTCG  
CTGATGTACACACATTTTATTATTTGCCAATGGTGCAATAACCACTGCTGACCAACCCA

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**FIGURE 4015**

MGKGRRESESSRRRPSGRSPTSTEKRMSEFESSISLPEVEPDPEAGSEQEVFSAVEGPSAEETPSDTESEVLE  
TQLDAHQGLLGMDPPGDMVDFVAAESTEDLKALSSEEEEMGGAAQEPESLLPPSVLDQASVIAERFVSSFRRS  
SVAQEDSKSSGFGSPRLVSRSSSVLSLEGSEKGLARHGSATDSLSCQLSPEVDISVGVATEDSPSVNGMEPPSPG  
CPVEPDRSSCKKKESALSTRDRLLLDKIKSYENAEHHDAGFSVRRRESLSYIPKGLVRNSISRFNSLPRDPEP  
VPPVGSKRQVGSRPTSWALFELPGPSQAVKGDPPPISDAEFRPSSEIVKIWEGMESSGGSPGKPGQGQANGFDL  
HEPLFILEEHHELGAITEESATASPESSSPTTEGRSPAHLARELKELVKELSSSTQGELVAPLHPRIVQLSHVMDSH  
VSEVRKKNVYQLARQYSLRIKSNKPVMARPPQLWEKVAPERD GKSP TVPCLQEEAGEPLGGKGRKPVL SLFDYE  
QLMAQEHSPPKPSSAGEMSPQRFFFNPSAVSQRTTSPGGRPSARSPLSP TETFSWPDVRELCSKYASRDEARRAG  
GGRPRGPPVNRSHSVPENMVPEPPLSGRVGRCRSLSTKRGRGGGEAAQSPGFLPQSKPDGGETLYVTADLTLEDNR  
RVIVMEKGPLPSP TAGLEESSGQGPSSPVALLGQVQDFQQSAECQPKEEGSRDPADPSQQGRVRNLREKFQALNS  
VG

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## FIGURE 4016A

CACGAGGCAGCACTCTCTTCGTCGCTTCGGCCAGTGTGTCGGGCTGGGCCCTGACAAGCCACCTGAGGAGAGGCT  
CGGAGCCGGGCGCGGACCCCGGCGATTGCCGCGCGCTTCTCTCTAGTCTCACGAGGGGTTTCCCGCCTCGCACCC  
CCACCTCTGGACTTGCCTTTTCCTTCTCTCTCCGCGTGTGGAGGGAGCCAGCGCTTAGGCCGGAGCGAGCCTGGG  
GGCCGCGCGCGTGAAGACATCGCGGGGACCGATTACCATGGAGGGCGCCGGCGGCGCGAACGACAAGAAAAAG  
ATAAGTTCTGAACGTCGAAAAGAAAAGTCTCGAGATGCAGCCAGATCTCGGCGAAGTAAAGAATCTGAAGTTTT  
TATGAGCTTGCTCATCAGTTGCCACTTCCACATAATGTGAGTTCGCATCTTGATAAGGCCTCTGTGATGAGGCTT  
ACCATCAGCTATTTGCGTGTGAGGAACTTCTGGATGCTGGTGATTTGGATATTGAAGATGACATGAAAGCACAG  
ATGAATTGCTTTTATTTGAAAGCCTTGATGGTTTTTGTATGGTTCTCACAGATGATGGTGACATGATTTACATT  
TCTGATAATGTGAACAAATACATGGGATTAACCTAGTTTGAACCTAAGTACACAGTGTGTTTGATTTTACTCAT  
CCATGTGACCATGAGGAAATGAGAGAAATGCTTACACACAGAAATGGCCTTGTGAAAAAGGGTAAAGAACAAAC  
ACACAGCGAAGCTTTTTTCTCAGAATGAAGTGTACCCTAAGTACCGAGGAAGAACTATGAACATAAAGTCTGCA  
ACATGGAAGGTATTGCACTGCACAGGCCACATTACGTATATGATACCAACAGTAACCAACCTCAGTGTGGGTAT  
AAGAAACCACCTATGACCTGCTTGGTGTGATTTGTGAACCCATTCTCACCCTCAAATATTGAAATTCCTTTA  
GATAGCAAGACTTTCTCAGTCGACACAGCCTGGATATGAAATTTTCTTATTGTGATGAAAGAATTACCGAATTG  
ATGGGATATGAGCCAGAAGAACTTTTAGCCGCTCAATTTATGAATATTATCATGCTTTGGACTCTGATCATCTG  
ACCAAACTCATCATGATATGTTTACTAAAGGACAAGTACCACAGGACAGTACAGGATGCTTGCCAAAAGAGGT  
GGATATGTCTGGGTTGAAACTCAAGCAACTGTCTATATATAACACCAAGAAATCTCAACCACAGTGCATTGTATGT  
GTGAATTACGTTGTGAGTGGTATTATTACGACGACTTGATTTTCTCCCTTCAACAAACAGAATGTGTCTTAA  
CCGTTTGAATCTTCAGATATGAAATGACTCAGCTATTACCAAAGTTGAATCAGAAGATACAAGTAGCCTCTTT  
GACAACTTAAGAAGGAACCTGATGCTTTAACTTTGCTGGCCCCAGCCGCTGGAGACACAATCATATCTTTAGAT  
TTTGGCAGCAACGACACAGAACTGATGACCAGCAACTTGAGGAAGTACCATTATATAATGATGTAATGCTCCCC  
TCACCAACGAAAAATTACAGAATATAAATTTGGCAATGTCTCCATTACCCACCGCTGAAACGCCAAAGCCACTT  
CGAAGTAGTGCTGACCCTGCACTCAATCAAGAAGTTGCATTAAATTAGAACCAATCCAGAGTCACTGGAACCTT  
TCTTTTACCATGCCCCAGATTGAGGATCAGACACCTAGTCTTCCGATGGAAGCACTAGACAAAGTTCACCTGAG  
CCTAATAGTCCCAGTGAAATATTGTTTTATGTGGATAGTGATATGGTCAATGAATTCAGTTGGAATTGGTAGAA  
AACTTTTTTGCTGAAGACACAGAAGCAAGAACCCTTTTCTACTCAGGACACAGATTTAGACTTGGAGATGTTA  
GCTCCCTATATCCCAATGGATGATGACTTCCAGTTACGTTCCCTTCGATCAGTTGTCAACATTAGAAAGCAGTTCC  
GCAAGCCCTGAAAGCGCAAGTCTCAAAGCACAGTTACAGTATTCCAGCAGACTCAAATACAGAACCTACTGCT  
AATGCCACCACTACCACTGCCACCACTGATGAATTAAGAACAGTGACAAAAGACCGTATGGAAGACATTAAATA  
TTGATTGCATCTCCATCTCCTACCCACATACATAAAGAACTACTAGTGCCACATCATCACCATATAGAGATACT  
CAAAGTCGGACAGCCTCACCAACAGAGCAGGAAAAGGAGTCATAGAACAGACAGAAAAATCTCATCCAAGAAGC  
CCTAACGTGTTATCTGTCGCTTTGAGTCAAAGAACTACAGTTCCCTGAGGAAGAACTAAATCCAAGATACTAGCT  
TTGCAGAATGCTCAGAGAAAGCGAAAAATGGAACATGATGGTTCACTTTTCAAGCAGTAGGAATTGGAACATTA  
TTACAGCAGCCAGACGATCATGCAGCTACTACATCACTTTCTTGGAAACGTGTAAAAGGATGCAAATCTAGTGAA  
CAGAATGGAATGGAGCAAAAGACAATTATTTAATACCCCTGATTTAGCATGTAGACTGCTGGGGCAATCAATG  
GATGAAAGTGGATTACCACAGCTGACCAGTTATGATTGTGAAGTTAATGCTCCTATACAAGGCAGCAGAAACCTA  
CTGCAGGGTGAAGAATTACTCAGAGCTTTGGATCAAGTTAACTGAGCTTTTCTTAATTTCAATTCCTTTTTTTGG  
ACACTGGTGGCTCACTACCTAAAGCAGTCTATTTATATTTTCTACATCTAATTTTAGAAGCCTGGCTACAATACT  
GCACAACTTGGTTAGTTCAATTTTTGATCCCTTTCTACTTAATTTACATTAATGCTCTTTTTTAGTATGTTCT  
TTAATGCTGGATCACAGACAGCTCATTTTCTCAGTTTTTTGGTATTTAAACCATTGCATTGCAGTAGCATCATTT  
TAAAAATGCACCTTTTTATTTATTTATTTTGGCTAGGGAGTTATCCCTTTTTCGAATTATTTTAAAGAAGAT  
GCCAATATAATTTTTGTAAGAAGGCAGTAACCTTTTCATCATGATCATAGGCAGTTGAAAAATTTTACACCTTTT  
TTTTACATTTTACATAAATAAATGCTTTGCCAGCAGTACGTGGTAGCCACAATTGCACAAATATATTTTCTTA  
AAAAATACCAGCAGTTACTCATGGAATATATCTGCGTTTATAAACTAGTTTTTAAAGAAGAAATTTTTTTGGC  
CTATGAAATTGTTAAACCTGGAACATGACATTGTTAATCATATAAATGATTCTTAAATGCTGTATGGTTTTATT  
ATTTAAATGGGTAAAGCCATTTACATAATATAGAAAGATATGCATATATCTAGAAGGTATGTGGCATTATTTGG  
ATAAAATCTCAATTCAGAGAAATCATCTGATGTTTCTATAGTCACTTTGCCAGCTCAAAGAAAACAATACCCT  
ATGTAGTTGTGGAAGTTATGCTAATATTGTGTAAGTATTAACCTAAATGTTCTGCCTACCCTGTTGGTAT

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**FIGURE 4016B**

AAAGATATTTTGAGCAGACTGTAAACAAGAAAAAAAAAATCATGCATTCTTAGCAAAATTGCCTAGTATGTTAAT  
TTGCTCAAAATACAATGTTTGATTTTATGCACTTTGTGCTATTAAACATCCTTTTTTTCATGTAGATTTCAATAA  
TTGAGTAATTTTAGAAGCATTATTTTAGGAATATATAGTTGTCACAGTAAATATCTTGTTTTTCTATGTACATT  
GTACAAATTTTTCATTCTTTTGCTCTTTGTGGTTGGATCTAACACTAACTGTATTGTTTTGTTACATCAAATAA  
ACATCTTCGTGGAAAAAAAAAAAAAAAAAAAAA.



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**FIGURE 4017**

MEGAGGANDKKKISSERRKEKSRDAARSRRSKESEVIFYELAHQLPLPHNVSSHLDKASVMRLTISYLRVRKLLDA  
GDLIEDDMKAQMNCFYLKALDGFVMVLTDGDMIIYISDNVNKYMGLTQFELTGHSVDFDFTHPCDHEEMREMLTH  
RNLGLVKKGKEQNTQRSFFLRMKCTLTSGRTMNIKSATWVLHCTGHIHVYDTNSNQPCQGYKKFPMTCLVLICE  
PIPHPSNIEIPLDSKTFLSRHSLDMKFSYCDERITELMGYEPEELLGRSIYIYYHALDSHDLTKTHDMFTKGQV  
TTGQYRMLAKRGYVWVETQATVIYNTKNSQPQCIVCVNYVSGIIQHDLIQSLQTECVLKPVESSDMKMTQLF  
TKVESEDTSLSLFDKLLKEPDALTLLAPAAGDTIISLDFGSNDTETDDQQLLEEVPLYNDVMLPSPNEKLQNINLAM  
SPLPTAETPKPLRSSADPALNQEVALKLEPNPESLELSFTMPQIQDQTPSPSDGSTROSSPEPNPSEYCFYVDS  
DMVNEFKLELVEKLFAEDTEAKNPFSTQDLDLEMLAPYIPMDDDFQLRSFDQLSPLESSASPESASPQSTVT  
VFQQTQIQEPTANATTTTATTDDELKTVTKDRMEDIKILIASPSPTHIHKETTSATSSPYRDTQSRTASPNRAGKG  
VIEQTEKSHPRSPNVLSVALSQRTTVPEEELNPKILALQNAQRKRKMEHDGSLFQAVGIGTLLQQPDDHAATTSL  
SWKRVKGCKSSEQNGMEQKTIILIPSDLACRLLGQSMDESGLPQLTSYDCEVNAPIQGSRNLLQGEELLRALDQV  
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**FIGURE 4018**

GGGAAGTGCTGTTGGAGCCGCTGTGGTTGCTGTCCGTGTAGTGAAAGCGCGTGCCTTTGTTTGTGTCCCTGGCCA  
TGTGTCCCTGGCCATGGCGCTGCAGCTCTCCCGGGAGCAGGGAATCACCCCTGCGTGGGAGTGCCGAAATCGTGGA  
CGAGTTCTTCTCATTTCGGCATCAACAGCATTTTATATCAGCGTGGCATTATCCATCTGAAATCTTTACTCGAGT  
GCAGAAATACGGACTCACCTTGCTTGTAAGTACTGATCTTGAGCTCATAAAAATACCTAAATAATGTGGTGGAAACA  
ACTAAAAGATTGGTTATACAAGTGTTCAGTTTCAGAACTGGTTGTAGTTATCTCAAATATTGAAAGTGGTGAGGT  
CCTGGAAAGATGACAGTTTGATATTGAGTGTGATAAGACTGCAAAAGATGACAGTGCACCCAGAGAAAAGTCTCA  
GAAAGCTATTTCAGGATGAAATCCGTTTCAGTCATCAGACAGATCACAGCTACAGTGACATTTCTGCCACTGTTGGA  
AGTTTCTTGTTTCATTGATCTGCTGATTTACACAGACAAAGATTTGGTTGTACCTGAAAAATGGGAAGAGTCGGG  
ACCACAGTTTATTACCAATTCTGAGGAAGTCTGCCTTTGTTCAATTTACTACTACAATCCACAAAGTAAATAGCAT  
GGTGGCCTACAAAATTCCTGTCAATGACTGAAGATGACATGAGGAAATAATGTAATTGTAATTTTGAAATGTGGT  
TTTCCTGAAATCAAGTCATCTATAGTTGATATGTTTTATTTTCATTGGTTAATTTATACATGGAGAAAACCAAAAT  
GATACTTACTGAACTGTGTGTAATTGTTCCTTTTGTTTTTTGGTACCTATTTGACTCACCATGGAGTTAACATC  
ATGAATTTATTGTGCATTATTCAAAAGGAACCAGGAGGTTTTTTTTTTGTCAACATTGTGATGTATATTCCITTTG  
AAGATAGTAACTGTAGATGGAAAACTTGTGCTATAAAGCTAAGTGCTTTCCTAAATCAGATGTTTTTGGTCAAGT  
AGCTTGACTCAGTATAGGTAGGGAGATATTTAATTATAAAAATACAGCAAAGGAAGTCTAAATATTCAGAATCTTT  
GTTAAAGTCCTGAAAGTAACTAATAATCTATAAACAAATGAAATATTGCTGTGTAGCTCCTTTTGACCTTCATTTT  
ATGCAATAATTTTCCCTATCGAATCAGTTTCCAATTATTTGACTTTAATTTATGTAACCTGAACCTGTGAAGGGAT  
GGATATTTGTACTGCTTGATGTTCTGTGATACAGAACTCTTAAAAATTTTTTTTGTGTTTTATAAAATCAAGTT  
TTAAGTGA

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**FIGURE 4019**

GGAGCCGCTGTGGTTGCTGTCCGTGTAGTGAAAGCGCGTGCCTTTGTTTGTGTCCCTGGCCATGTGTCCCTGGCC  
ATGGCGCTGCAGCTCTCCCGGGAGCAGGGAATCACCTGCGTGGGAGTGCCGAAATCGTGGACGAGTTCTTCTCA  
TTCGGCATCAACAGCATTTTATATCAGCGTGGCATTATCCATCTGAAATCTTTACTCGAGTGCAGAAATACGGA  
CTCACCTTGCTTGTAACACTACTGATCTTGAGCTCATAAAATACCTAAATAATGTGGTGGAACTAAAGTGCAC  
CCAGAGAAAAGTCTCAGAAAGCTATTTCAGGATGAAATCCGTTTCAGTCATCAGACAGATCACAGCTACAGTGACAT  
TTCTGCCACTGTTGGAAGTTTCTTGTTCAATTTGATCTGCTGATTTACACAGACAAAGATTTGGTTGTACCTGAAA  
AATGGGAAGAGTCGGGACCACAGTTTATTACCAATTCTGAGGAAGTCTGCCTTTGTTTCAATTTACTACTACAATCC  
ACAAAGTAAATAGCATGGTGGCCTACAAAATTCCTGTCAATGACTGAAGATGACATGAGGAAATAATGTAATTGT  
AATTTGAAATGTGGTTTTCTGAAATCAAGTCATCTATAGTTGATATGTTTATTTTCAT

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**FIGURE 4020**

ATGATGTCTTATCTTAAGCAACCGCCTTACGCAGTCAATGGGCTGAGTCTGACCACTTCGGGTATGGACTTGCTG  
CACCCCTCCGTGGGCTACCCGGGGCCCTGGGCTTCTTGTCCTCGCAGCCACCCCCGGAAACAGCGCCGGGAGAGG  
ACGACGTTCACTCGGGCGCAGCTAGATGTGCTGGAAGCACTGTTTGCCAAGACCCGGTACCCAGACATCTTCATG  
CGAGAGGAGGTGGCACTGAAAATCAACTTGCCCCGAGTCGAGGGTGCAGGTATGGTTTAAGAATCGAAGAGCTAAG  
TGCCGCCAACACAGCAACAACAGCAGAATGGAGGTCAAACAAAGTGAGACCTGCCAAAAGAAGACATCTCCA  
GCTCGGGAAGTGAGTTCAGAGAGTGGAACAAGTGGCCAATTCACTCCCCCTCTAGCACCTCAGTCCCGACCATT  
GCCAGCAGCAGTGCTCCTGTGTCTATCTGGAGCCCAGCTTCCATCTCCCCACTGTCAGATCCCTTGTCACCTCC  
TCTTCCTGCATGCAGAGGTCTATCCCATGACCTATACTCAGGCTTCAGGTTATAGTCAAGGATATGCTGGCTCA  
ACTTCCTACTTTGGGGGCATGGACTGTGGATCATATTTGACCCCTATGCATCACCAGCTTCCCGGACCAGGGGCC  
ACACTCAGTCCCATGGGTACCAATGCAGTCACCAGCCATCTCAATCAGTCCCAGCTTCTCTTTCCACCCAGGGA  
TATGGAGCTTCAAGCTTGGGTTTTAACTCAACCACTGATTGCTTGGATTATAAGGACCAAACGCTCCTGGAAG  
CTTAACTTCAATGCTGACTGCTTGGATTATAAAGATCAGACATCCTCGTGGAATTCCAGGTTTTGTGA

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**FIGURE 4021**

MMSYLKQPPYAVNGLSLTSGMDLLHPSVGYPGPWASCPAATPRKQRRERTTFTRAQLDVLEALFAKTRYPDIFM  
REEVALKINLPESRVQVWFKNRRAKCRQQQQQQNGGQNKVRPAKKKTSPAREVSSESGETSGQFTPPSSTSVPTI  
ASSAPVSIWSPASISPLSDPLSTSSSCMQRSYPMTYTQASGYSQGYAGSTSYFGGMDCGSYLTPMHHQLPGPGA  
TLSPMGTNAVTSHLNQSPASLSTQGYGASSLGFNSTTDCLDYKDQTASWKLNFNADCLDYKDQTSSWKQVL

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**FIGURE 4022**

CCAGCCAACGAGCGGAAAATGGCAGACAATTTTCGCTCCATGATGCGTTATCTGGGTCTGGAAACCCAAACCCT  
CAAGGATGGCCTGGCGCATGGGGGAACCAGCCTGCTGGGGCAGGGGGCTACCCAGGGGCTTCCTATCCTGGGGCC  
TACCCCGGGCAGGCACCCCCAGGGGCTTATCCTGGACAGGCACCTCCAGGCGCCTACCATGGAGCACCTGGAGCT  
TATCCCGGAGCACCTGCACCTGGAGTCTACCCAGGGCCACCCAGCGGCCCTGGGGCCTACCCATCTTCTGGACAG  
CCAAGTGCCCCCGGAGCCTACCTGCCACTGGCCCCCTATGGCGCCCCTGCTGGGCCACTGATTGTGCCTTATAAC  
CTGCCTTTGCCTGGGGGAGTGGTGCCTCGCATGCTGATAACAATTCTGGGCACGGTGAAGCCCAATGCAAACAGA  
ATTGCTTTAGATTTCCAAAGAGGGAATGATGTTGCCTTCCACTTTAACCACGCTTCAATGAGAACAACAGGAGA  
GTCATTGTTTGCAATACAAAGCTGGATAATAACTGGGGAAGGGAAGAAAGACAGTCGGTTTTCCCATTTGAAAGT  
GGGAAACCATTCAAAATACAAGTACTGGTTGAACCTGACCACTTCAAGGTTGCAGTGAATGATGCTCACTTGTTG  
CAGTACAATCATCGGGTTAAAAAATCAATGAAATCAGCAAACCTGGGAATTTCTGGTGACATAGACCTCACCAGT  
GCTTCATATACCATGATATTAATCTGAAAGGGGCAGATTAAAAAAAAAAAAAAGAATCTAAACCTTACATGTGTA  
AAGGTTTCATGTTCACTGTGAGTGAAAATTTTACATTCATCAATATCCCTCTTGTAAGTCATCTACTTAATAAA  
TATTACAGTGAAAG

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**FIGURE 4023**

MADNFSLHDALSGSGNPNPQGWP  
GAWGNQFAGAGGYPGASYPGAYPGQ  
APPAYPGQAPPAYHGAPGAYPGAPA  
PGVYPGPPSGPGAYPSSGQPSAPGAY  
PATGPYGAPAGPLIVPYNLPLPGGV  
VPRMLITILGTVKPNANRIALDFQ  
RGNDVAFHFNPRFNENNRVIVCNTKLD  
NNWGREERQSVFFESGKPFKIQVLVE  
PDHFKVAVNDAHLLQYNHRV  
KKLNEISKLGISGDIDLTSA  
SYTMI

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**FIGURE 4024**

CTGCGCCGCCTTTCTCCGCTGGCAACGGCGCCGCTCCCCGCTCCTCCTCCCCAGCCATGGCGTTCACGTTGCGGG  
CCTTCTGCTACATGCTGGCGCTGCTGCTCACTGCCGCGCTCATCTTCTTCGCCATTTGGCACATTATAGCATTG  
ATGAGCTGAAGACTGATTACAAGAATCCTATAGACCAGTGTAATACCCTGAATCCCCCTTGTACTCCCAGAGTACC  
TCATCCACGCTTTCTTCTGTGTCATGTTTCTTTGTGCAGCAGAGTGGCTTACACTGGGTCTCAATATGCCCTCT  
TGGCATATCATATTTGGAGGTATATGAGTAGACCAGTGATGAGTGGCCCAGGACTCTATGACCCTACAACCATCA  
TGAATGCAGATATTCTAGCATATTGTCAGAAGGAAGGATGGTGCAAATTAGCTTTTTATCTTCTAGCATTTTTTT  
ACTACCTATATGGCATGATCTATGTTTTGGTGAGCTCTTAGAACAACACACAGAAGAATTGGTCCAGTTAAGTGC  
ATGCAAAAAGCCACCAAATGAAGGGATTCTATCCAGCAAGATCCTGTCCAAGAGTAGCCTGTGGAATCTGATCAG  
TTACTTTAAAAAATGACTCCTTATTTTTTAAATGTTTCCACATTTTTTGCTTGTGGAAAGACTGTTTTCATATGTT  
ATACTCAGATAAAGATTTTAAATGGTATTACGTATAAATTAATATAAAATGATTACCTCTGGTGTGACAGGTTT  
GAACTTGCACTTCTTAAGGAACAGCCATAATCCTCTGAATGATGCATTAATTACTGACTGTCCTAGTACATTGGA  
AGCTTTTGTTTATAGGAACCTGTAGGGCTCATTTTGGTTTCATTGAAACAGTATCTAATTATAAATTAGCTGTAG  
ATATCAGGTGCTTCTGATGAAGTGAAAATGTATATCTGACTAGTGGGAACTTCATGGGTTTCCCTCATCTGTCAT  
GTCGATGATTATATATGGATACATTTACAAAAATAAAAAGCGGGAATTTTCCCTTCGCTTGAATATTATCCCTGT  
ATATTGCATGAATGAGAGATTTCCCATATTTCCATCAGAGTAATAAATATACTTGCTTTAATTCTTAAGCATAAG  
TAAACATGATATAAAAAATATATGCTGAATTACTTGTGAAGAATGCATTTAAAGCTATTTTAAATGTGTTTTATT  
TGTAAGACATTACTTATTAAGAAATTGGTTATTATGCTTACTGTTCTAATCTGGTGGTAAAGGTATTCTTAAGAA  
TTTGCAGGTACTACAGATTTTCAAAACTGAATGAGAGAAAATTGTATAACCATCCTGCTGTTTCCTTTAGTGCAAT  
ACAATAAAACTCTGAAATTAAG



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**FIGURE 4025A**

ATGAGGGGGACCGGTGGCCGGGCGGCCGGTGTGTCGTCGTTACCAGTGCTACTGCTGCTGCCGTTGCTAATG  
TTGCGGGCCGCGCGCTGCACCCAGACGAGCTCTTCCCACACGGGGAGTCGTGGGGGGACCAGCTCCTGCAGGAA  
GGCGACGACGAAAGCTCAGCCGTGGTGAAGCTGGCGAATCCCCTGCACTTCTACGAAGCCCCGATTAGCAACCTC  
TACGTGGGCACCAACGGCATCATCTCCACTCAGGACTTCCCCAGGGAAACGCAGTATGTGGACTATGATTTCCCC  
ACCGACTTCCCGGCCATCGCCCCCTTTTCTGGCGGACATCGACACGAGCCACGGCAGAGGCCGAGTCTGTACCGA  
GAGGACACCTCCCCCGAGTGCTGGGCCCTGGCCGCCCGCTATGTGCGCGCTGGCTTCCCGCGCTCTGCGCGCTTT  
ACCCCCACCCACGCTTCTCTGGCCACCTGGGAGCAGGTAGGCGCTTACGAGGAGGTCAAGCGCGGGGCGCTGCC  
TCGGGAGAGCTGAACACTTTCCAGGCAGTTTGGCATCTGATGGGTCTGATAGCTACGCCCTCTTTCTTTATCCT  
GCCAACGGCCTGCAGTTCCTTGAACCCGCCCAAAGAGTCTTACAATGTCCAGCTTCAGCTTCCAGCTCGGGTG  
GGCTTCTGCCGAGGGGAGGCTGATGATCTGAAGTCAGAAAGGACCATATTTAGCTTGACTAGCACTGAACAGTCT  
GTGAAAAATCTCTATCAACTAAGCAACCTGGGGATCCCTGGAGTGTGGGCTTTCCATATCGGCAGCACTTCCCCG  
TTGGACAATGTCAGGCCAGCTGCAGTTGGAGACCTTTCCGCTGCCCACTCTTCTGTTCCCTGGGACGTTCTTTC  
AGCCATGCTACAGCCCTGGAAAGTGACTATAATGAGGACAATTTGGATTACTATGATGTGAATGAGGAGGAAGCT  
GAATACCTTCCGGGTGAACCAGAGGAGGCATTGAATGGCCACAGCAGCATTGATGTTTCTTCCAATCCAAAGTG  
GATACAAAGCCTTTAGAGGAATCTTCCACCTTGGATCTCACACCAAAGAAGGAACATCTCTGGGAGAGGTAGGG  
GGCCAGATTTAAAGGCCAAGTTGAGCCCTGGGATGAGAGAGAGACCAGAAGCCCAGCTCCACCAGAGGTAGAC  
AGAGATTCACTGGCTCCTTCTTGGGAAACCCACCACCGTACCCCCGAAAACGGAAGCATCCAGCCCTACCCAGAT  
GGAGGGCCAGTGCCCTCGGAAATGGATGTTCCCCCAGCTCATCCTGAAGAAGAAATTGTTCTTGAAGTTACCTT  
GCTTCAGGTACACTACACCTTAAGTCGAGGGACGTATGAGGTGGGACTGGAAGACAACATAGGTTCCAACACC  
GAGGTCTTCACGTATAATGCTGCCAACAAGGAAACCTGTGAACACAACCACAGACAATGCTCCCGGCATGCCTTC  
TGCACGGACTATGCCACTGGCTTCTGCTGCCACTGCCAATCCAAGTTTATGGAAATGGGAAGCACTGTCTGCCT  
GAAGGGGCACCTCACCGAGTGAATGGGAAAGTGAGTGGCCACCTCCACGTGGGCCATACACCCGTGCACTTCACT  
GATGTGGACCTGCATGCGTATATCGTGGGCAATGATGGCAGAGCCTACACGGCCATCAGCCACATCCACAGCCA  
GCAGCCCAGGCCCTCTCCCCCTCACACCAATTGGAGGCCGTGTTGGCTGGCTCTTTGCTTTAGAAAAACCTGGC  
TCTGAGAACGGCTTCAGCCTCGCAGGTGCTGCCTTTACCCATGACATGGAAGTTACATTCTACCCGGGAGAGGAG  
ACGGTTCTGTATCACTCAAAGTCTGAGGGACTTGACCCAGAGAACTACCTGAGCATTAAAGACCAACATTCAAGGC  
CAGGTGCCTTACGTCTCAGCAAATTTACAGCCCACATCTCTCCCTACAAGGAGCTGTACCACTACTCCGACTCC  
ACTGTGACCTCTACAAGTTCCAGAGACTACTCTCTGACTTTTGGTGCAATCAACCAAACATGGTCTTACCGCATC  
CACCAGAACATCACTTACCAGGTGTGCAGGCACGCCCCAGACACCCGTCTTCCCCACCACCCAGCAGCTGAAC  
GTGGACCGGTCTTTGCCTTGTATAATGACGAAGAAAGAGTGCTTAGATTGCTGTGACCAATCAAATTGGCCCG  
GTCAAAGAGGATTAGACCCCACTCCGGGGAATCCTTGCTATGATGGGAGCCACATGTGTGACACAACAGCACGG  
TGCCATCCAGGGACAGGTGTAGATTACCTGTGAGTGGCATCTGGGTACCAGGGAGATGGACGGAACCTGTGTG  
GATGAAAATGAATGTGCAACTGGCTTTCATCGCTGTGGCCCAACTCTGTATGTATCAACTTGCTTGAAGCTAC  
AGGTGTGAGTGCCGGAGTGGTTATGAGTTTGAGATGACCGGCATACTTGATCTTGATACCCCACTGCCAAAC  
CCCTGTGAGGATGGCAGTCATACCTGTGCTCCTGCTGGGCAGGCCCGGTGTGTTACCATGGAGGCAGCAGTTT  
AGCTGTGCCTGCCTGCCTGGTTATGCCGGCGATGGGCACCAGTGCACTGATGTAGATGAATGCTCAGAAAACAGA  
TGTCACCTGCAGCTACCTGCTACAATACTCCTGGTTCTTCTCTGCGTTGTCAACCCGGATATTATGGGGAT  
GGATTTCACTGCATACCTGACTCCACCTCAAGCCTGACACCTGTGAACAACAGCAGCGCCATGCCAGGCCAG  
TATGCTTACCTGGGGCCCGGTTCCACATCCCCCAATGCGACGAGCAGGGCAACTTCTGCCCCCTACAGTGTCT  
GGCAGCACTGGTTTCTGCTGGTGGTGGACCTGATGGTCTGAAAGTTCTGGTACCCAGACTCCACCTGGCTCC  
ACCCGCTCACTGTGGACCATCACCAGAGCCACCCAGAGGCCCCGACCATCTGTGAGCGCTGAGGGGAAAAC  
CTGCTGGAGCACTACGGTGGCACCCCGGAGATGACCACTGACGTGCCCCAGTGGCATGACCTGGGCCACTTCTATC  
CCCCTGAGTGCCACGAAAGAGCGACTTCTGCTGGTGTGTGGACAAAGATGGCAGAGAGGTGCAGGGCACCCGC  
TCCAGCCAGGCACACCCCTGCGTGTATACCCACCGTCTGCTCCACCATGGTCCGGCCACGCCCCGGCCAGAT  
GTGACCCCTCCATCTGTGGGCACCTTCTGCTCTATCTCAGGGCCAGCAGATTGGCTACTTACCCCTCAATGGC  
ACCAGGCTTCAGAAGGATGCAGCTAAGACCCTGCTGTCTCTGCACTGGCTCCATAATCGTGGGAATTGATTACGAC  
TGCCGGGAGAGGATGGTGTACTGGACAGATGTTGCTGGACGGACAATCAGCCGTGCCGGTCTGGAACTGGGAGCA  
GAGCCTGAGACGATCGTGAATTACGGTCTGATAAGCCCTGAAGGACTTGCCATAGACCACATCCGCAGAACAAATG

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**FIGURE 4025B**

TACTGGACGGACAGTGTCTGGATAAGATAGAGAGCGCCCTGCTGGATGGCTCTGAGCGCAAGGTCCTCTTCTAC  
ACAGATCTGGTGAATCCCCGTGCCATCGCTGTGGATCCAATCCGAGGCAACTTGTACTGGACAGACTGGAATAGA  
GAAGCTCCTAAAAATTGAAACGTCATCTTTAGATGGAGAAAACAGAAGATTCTGATCAATACAGACATTGGATTG  
CCCAATGGCTTAACCTTTGACCCTTTCTCTAAACTGCTCTGCTGGGCAGATGCAGGAACCAAAAACTGGAGTGT  
ACACTACCTGATGGAAGTGGACGGCGTGTCAATTCAAAACAACCTCAAGTACCCCTTCAGCATCGTAAGCTATGCA  
GATCACTTCTACCACACAGACTGGAGGAGGGATGGTGTGTATCAGTAAATAAACATAGTGGCCAGTTTACTGAT  
GAGTATCTCCCAGAACAACGATCTCACCTCTACGGGATAACTGCAGTCTACCCCTACTGCCCCAACAGGAAGAAAG  
TAAGTACAGTAATGTAAGGAAGACTTGGAGTTTACAATCAGAACCTGGACCCTAAAGAACAGTGACTGCAAAGG  
CAAAGAAAGTAAAAAAGGAATTGGCCATTAGACGTTCTGAGCATCCAAGATGAACATTTTGTAGTGCAAAAAGA  
CTTTTGTGAAAAGCTGATACCTCAATCTTTACTACTGTATTTTTAAAAATGAAGGTTGTTATTGCAAGTTTAAAA  
AGGTAACAGAATTTTAACTGTTGCTTATTAAAGCAACATCTTGTAACATTATCATTAAATTTTAAAGATCAA  
ATTCATTCAACTAAGAATTAGAGTTTAAAGACTCTAAACCTGATTTTTGCCATGGATTCTTCTGGCCAAGAAATT  
AAAGCACATGTGATCAATATAACAATATAATCCTAAACCTTGACAGTTGGAGAAGCCAATGCAGAACTGATGGGA  
AAGGACCAATTATTTATAGTTTCCCAACAAAAGTTCTAAGATTTTTTACCTCTGCATCAGTGCATTTCTATTTAT  
ATCAAAAGGTGCTAAAAATGATTCAATTTGCATTTTCTGATCCTGTAGTGCCTCTATAGAAGTACCCACAGAAAGT  
AAAGTATCACATTTATAAATACCAAGATGTAACAATTTTAAAAATTTTCTAGATTACTCCAATAAAGTGTTTTAA  
GTTT

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**FIGURE 4026**

MEGDRVAGR PVLSSLPVLLLLPLMLLRAAALHPDELFPHGESWGDQLLQEGDDESSAVVKLANPLHFYEAFSNL  
YVGTNGIISTQDFPRETQYVDYDFPTDFPAIAPFLADIDTSHGRGRVLYREDTSEAVLGLAARYVRAGFPRSARF  
TPTHAFLATWEQVGAYEEVKRGALPSGELNTFQAVLASDGSYSALFLYPANGLQFLGTRPKESYNVQLQLPARV  
GFCRGEADDLKSEGPYFSLTSTEQSVKNLYQLSNLGI PGVWAFHIGSTSPLDNVREPAAVGDL SAAHSSVPLGRSF  
SHATALES DY NEDNLDY YDVNEEEAEYLPGEPEEALNGHSSIDVSFQSKVDTKPLEESSTLDPHTKEGTS LG EVG  
GPD LKGQVEPWDERETRSPAPPEVDRDSLAPSWETPPYPENGSIQPYPDGGPVPSEMDVPPAHPEEEIVLRSYP  
ASGHTTPLSRGTIEVGLEDNIGSNTEVF TYNAANKETCEHNHRQCSRHAFCTDYATGFCCHCQSKFYGNKGKCLP  
EGAPHRVNGKVSGHLHVGH TPVHFTD VDLHAYIVGNDGRAYTAISHIPQPAQAALLPLTPIGGLFGWLF ALEKPG  
SENGFSLAGAAFTHDMEVTFYPGEETVRITQTAEGLDPENYLSIKTNIQGQVPYVSANFTAHISPYKELYHYSDS  
TVTSTSSRDYSLTFGAINQTWSYRIHQNITYQVCRHAPRHPSPFTTQQLNVDRVFALYNDEERVLRFAVTNQIGP  
VKEDSDPTPGNPCYDGS H MCDTTARCHPGTGVDYTCECASGYQGDGRNCVDENECATGFHRCGPNSVCINLPGSY  
RCECRSGYEFADDRHTCILITPPANPCEDGSHTCAPAGQARCVHHGGSTFSCACLPGYAGDGHQCTDVDECS ENR  
CHPAATCYNTPGSFSCRCQPGYYGDFQCIPDSTSSLT PCEQQQRHAQAQYAYPGARFHIPQCDEQGNFLPLQCH  
GSTGFCWCVDPDGHEVPGTQTTPPGSTPPHCGPSPEPTQRPTTICERWRENLL EHYGGTPRDDQYVPQCDDLGHFI  
PLQCHGKSDFCWCVDKDGREVQGTRS QPGTTPACIPTVAPPMVRPTPRPDVTPPSVGTFLLYTQGGQIGYLP L NG  
TRLQKDAAKTLLSLHGSIIVGIDYDCRERMVYWTDVAGRTISRAGLELGAEPETIVNSGLISPEGLAIDHIRRTM  
YWTDSVLDKIESALLDGSERKVL FYTDLVNPRIAVDP I RGNLYWTDWNREAPKIETSSLDGENRRILINTDIGL  
PNGLTFDPFSKLLCWADAGTKKLECTLPDGTGRRVIQNNLKYPFSIVSYADHFYHTDWRRDGVVSVNKHSGQFTD  
EYLPEQRSHLYGITAVYPYCPTGRK

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**FIGURE 4027**

GCGGCCACCGCTTTTAAGCCACGATTGGCGAAGGCCGCCGTCATTTTCGGAGCGACTCAGCGCCTGCCCCGCCCTCT  
CGCCGCGTCGCCGGTGCCTGCGCCTCCCGCTCCACCTCGCTTCTTCTCTCCCGGCCGAGGCCCGGGGACCAGAG  
CGAGAAGCGGGGACCATGTTCCGACGCAAGTTGACGGCTCTCGACTACCACAACCCGCGCGCTTCAACTGCAAA  
GATGAAACAGAATTTAGAACTTCATCGTTTGGCTTGAAGACCAGAAAATCAGGCACTACAAGATTGAAGACAGA  
GGGAATTTAAGAAACATCCACAGCAGCGACTGGCCCAAGTTCTTTGAAAAGTATCTCAGAGATGTTCACTGTCCT  
TTCAAGATTCAAGATCGACAAGAAGCTATTCAGTGGCTTCTTGGTTTAGCTGTTAGACTTGAATATGGAGATAAT  
GCTGAAAAATACAAGGATTTAGTACCTGATAATTCAAAAAGTCTGACAATGCAACTAAAAATGCAGAACCATTG  
ATCAATTTGGATGTAAATAATCCTGATTTTAAGGCTGGTGTGATGGCTTTGGCTAACCTGCTTCAGATTCAGCGT  
CATGATGATTACCTGGTAATGCTTAAGGCAATTCGGATTTTGGTTTCAAGAGCGCCTGACACAGGATGCAGTTGCT  
AAGGCAATCAAACAAAAGAGGGCTTACCTGTTGCTTTAGACAAACATATTCTTGGTTTTGACACAGGAGATGCA  
GTTCTTAATGAAGCTGCTCAAATTCTGCGATTGCTGCACATAGAGGAGCTCAGAGAGCTACAGACAAAATCAAC  
GAAGCCATAGTAGCTGTTCAAGCAATTATTGCTGATCCAAAGACAGACCACAGACTGGGAAAAGTTGGAAGATGA

ACACTTGAGGACTTCAGCTTCTCACCTACTTAGTACAGTTGGGAACCATACACTTCTGGCATGTTTGGAATCAA  
AATGTCACATTCTCGGGGAGGAAGCCCAGAAAATTGGGTATGTTCTAGAGATTTACCACCATTGCTTATTGCTT  
TTTTCTTTAATAAAGTTTAGGAAAGTAGAA

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**FIGURE 4028**

MFRRKLTALDYHNPAGFNCKDETEFRNFIVWLEDQKIRHYKIEDRGNLRNIHSSDWPKFFEKYLRDVHCPFKIQD  
RQEAIHWLLGLAVRLEYGDNAEKYKDLVPDNSKTADNATKNAEPLINLDVNNPDFKAGVMALANLLQIQRHDDYL  
VMLKAIRILVQERLTQDAVAKANQTKEGLPVALDKHILGFDTGDAVLNEAAQILRLLHIEELRELQTKINEAIVA  
VQAIADPKTDHRLGKVGR

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**FIGURE 4029**

CCGCACTTCCAGCTCTCTGCGCAGCCCGCCGCGCAGCCCGCCGCCAGCCATGGCGAAGCCCCTGACGGACCAG  
GAGAAGCGGCGGCAGATCAGCATCCGCGGCATCGTGGGCGTGGAGAACGTGGCAGAGCTGAAGAAGAGTTTCAAC  
CGGCACCTGCACTTCACGCTGGTCAAGGACCGCAACGTGGCCACCACCCGCGACTACTACTTCGCGCTGGCGCAC  
ACGGTGC GCGACCACCTGGTGGGCGCTGGATCCGCACGCAGCAGCACTACTACGACAAGTGGCCCAAGAGGGTA  
TATTACCTCTCTCTGGAATTTTACATGGGCCGAACATTACAGAACACCATGATCAACCTCGGTCTGCAAAATGCC  
TGTGATGAGGCCATTTACCAGCTTGGATTGGATATAGAAGAGTTAGAAGAAATTGAAGAAGATGCTGGACTTGGC  
AATGGTGGTCTTGGGAGACTTGTCTGCTTCTTGGATTCCATGGCAACCTGGGACTTGCAGCCTATGGATAC  
GGCATTCCGGTATGAATATGGGATTTTCAATCAGAAGATCCGAGATGGATGGCAGGTAGAAGAAGCAGATGATTGG  
CTCAGATATGGAAACCCCTGGGAGAAGTCCCGCCAGAATTCATGCTGCCTGTGCACCTTCTATGGAAAAGTAGAA  
CACACCAACACCGGGACCAAGTGGATTGACACTCAAGTGGTCTTGGCTCTGCCATATGACACCCCGTGCCCGGC  
TACATGAATAACACTGTCAACACCATGCGCCTCTGGTCTGCTCGGGCACCAATGACTTTAACCTCAGAGACTTT  
AATGTTGGAGACTACATTCAGGCTGTGCTGGACCGAAACCTGGCCGAGAACATCTCCCGGGTCTCTATCCCAAT  
GACAAATTTTTTTGAAGGAAGGAGCTAAGATTGAAGCAGGAATACTTTGTGGTGGCTGCAACCTTGCAAGATATC  
ATCCGCCGTTTCAAAGCCTCCAAGTTTGGCTCCACCCGTGGTGCAGGAACCTGTGTTTGATGCCTTCCCGGATCAG  
GTGGCCATCCAGCTGAATGATACTCACCTGCACTCGCGATCCCTGAGCTGATGAGGATTTTTGTGGATATTGAA  
AACTGCCCTGGTCCAAGGCATGGGAGCTCACCCAGAAGACCTTCGCCTACCCAACCACACAGTGTCTCCGGAA  
GCCCCTGGAGCGCTGGCCCGTGGACCTGGTGGAGAAGCTGTCCCTCGACATTTGGAAATCATTATGAGATAAAT  
CAGAAGCATTITAGATAGAATTGTGGCCTTGTTCCTAAAGATGTGGACCGTCTGAGAAGGATGTCTCTGATAGAA  
GAGGAAGGAAGCAAAAGGATCAACATGGCCCATCTCTGCATTGTTCGGTTCCTCATGCTGTGAATGGCGTGGCTAAA  
ATCCACTCAGACATCGTGAAGACTAAAGTATTCAAGGACTTCAGTGAGCTAGAACCTGACAAGTTTCAGAATAAA  
ACCAATGGGATCACTCCAAGGCGCTGGCTCCTACTCTGCAACCCAGGACTTGCAAGCTCATAGCAGAGAAAATT  
GGAGAAGACTATGTGAAAGACCTGAGCCAGCTGACGAAGCTCCACAGCTTCCTGGGTGATGATGTCTTCTCCGG  
GAACTCGCCAAGGTGAAGCAGGAGAATAAGCTGAAGTTTTCTCAGTTCTTGGAGACGGAGTACAAAGTGAAGATC  
AACCCTATCCTCCATGTTTGATGTCCAGGTGAAGAGGATACATGAGTACAAGCGACAGCTCTTGAAGTGTCTGCAT  
GTGATCACGATGTACAACCGCATTAAGAAAAGACCCTAAGAAGTTATTTCGTGCCAAGGACAGTTATCATTGGTGGT  
AAAGCTGCCCCAGGATATCACATGGCCAAAATGATCATAAAGCTGATCACTTCAGTGGCAGATGTGGTGAACAAT  
GACCTATGGTTGGAAGCAAGTTGAAAGTCATCTTCTTGGAGAACTACAGAGTATCTCTTGTGAAAAAGTCATT  
CCAGCCACAGATCTGTCTAGAGCAGATTTCCACTGCAGGCACCGAAGCCTCGGGGACAGGCAATATGAAGTTCATG  
CTAAATGGGGCCCTAACTATCGGGACCATGGATGGGGCCAAATGTGGAAATGGCAGAAGAAGCTGGGGAAGAGAAC  
CTGTTTCATCTTTGGCATGAGGATAGATGATGTGGCTGCTTTGGACAAGAAAGGTACGAGGCAAAAGAATACTAT  
GAGGCACTTCCAGAGCTGAAGCTGGTCATTGATCAAATTGACAATGGCTTTTTTCTCCCAAGCAGCCTGACCTC  
TTCAAAGATATCATCAACATGCTATTTTATCATGACAGTTTAAAGTCTTTGCAGACTACGAAGCCTATGTCAAG  
TGTCAGATAAAGTGAGTCAGCTGTACATGAATCCAAAGGCCTGGAACACAATGGTACTCAAAACATAGCTGCC  
TCGGGGAAATTCTCCAGTGACCGAACAATTAAAGAATATGCCCAAAACATCTGGAACGTGGAACCTTCAGATCTA  
AAGATTTCTCTATCCAATGAATCTAACAAAGTCAATGGAAATTGAACTCTACAATGTCTCTAGAAAACATAGCTT  
CTTACTGAACCTTGAACAT

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**FIGURE 4030**

MAKPLTDQEKRRQISIRGIVGVENVAEKKSFNRHLHFTLVKDRNVATTRDYFALAHTVRDHLVGRWIRTQQHY  
YDKCPKRYYLSLEFYMGRTLQNTMINLGLQNACDEAIYQLGLDIEELEIEEDAGLGNGGLGRLAACFLDSMAT  
LGLAAYGYGIRYEGIFNQKIRDGWQVEEADDWLRYPWPKSRPEFMLPVHFGYKVEHTNTGKWKIDTQVVLAL  
PYDTPVPGYMNNTVNTMRLWSARAPNDFNLRDFNVGDYIQAVLDRNLAENISRVLYPNDNFFEGKELRLKQYEFV  
VAATLQDIIRRFKASKFGSTRGAGTVFDAPDQVAIQNLNDTHPALAIPELMRIFVDIEKLPWSKAWELTQKTFAY  
TNHTVLPEALERWPVDLVEKLLPRHLEIIYEINQKHLDRIVALFPKDVDRLRRMSLIEEEGSKRINMAHLCIVGS  
HAVNGVAKIHSDIVKTKVFKDFSELEPDKFQNKTNGITPRRWLLCNPGLAELIAEKIGEDYVKDLSQLTKLHSF  
LGDDVFLRELAKVKQENKLFQFLETEYKVKINPSSMFDVQVKRIHEYKRQLLNCLHVITMYNRIKDPKKLFV  
PRTVIIGGAAPGYHMAKMIIKLITSVADVNNNDPMVGSKLKVIFLENYRVSLAEKVIPATDLSEQISTAGTEAS  
GTGNMKFMLNGALTIGTMDGANVEMAEAEAGEENLFI FGMRIDDVAALDKKGYEAEKEYEALPELKLVIDQIDNGF  
FSPKQPDLFKDIINMLFYHDFKVFADYEAYVKCQDKVSQLYMNPKAWNTMVLKNIAASGKFSSDRTIKEYAQNI  
WNVEPSDLKISLSNESNKVNGN

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**FIGURE 4031**

CATGCGTGGGCCAGCTTCTTCCTTTTACCTCGTTGCACTGCTGAGAGCAAGATGGGTCACCAGCAGCTGTACTGG  
AGCCACCCGCGAAAAATTCGGCCAGGGTTCTCGCTCTTGTCGTGTCTGTTCAAACCGGCACGGTCTGATCCGGAAA  
TATGGCCTCAATATGTGCCGCCAGTGTTTCCGTCAGTACGCGAAGGATATCGGTTTCATTAAGAAAGACCTGAGC  
TGTCTTCCTTGGCACTGCCTATGGAGGTGACACCCATCTCCTCCATCATGGCCATCCTGAGACCGCTCGCGAAGC  
CCAAGATCATCAAAAAGAGCACCAAGTTCACTGGGAACCAAGTCAGACTGATATGTCAAAATTAAGGGTAACTGGT  
GGAAACACAGAGGTATTAACAACAGGGTTTCATAGAAGGTTTGAGGGCCAGATCTATGCCCAACATTGGTTATGGG  
AGAAACAAAAAGACAAAGCACATACTGCCCAGTGGCTTCTGGAAGTTCTGGTCCACAACGTTAAGGAGCTGGAA  
GTACTGCTGGTGAGCAACAAATCTTACTGTGTTGAGATCACTCATGATGTTTCTTCCAAGAACTGCAAAGCCATC  
TTGGAAAGAGCAGCCCAGGTGGTCATCAGAGTCACCAATGCCAATGCCAGCCTGCACAGTGCAGAAAGTGAATAG  
ACAGTGAATGTGTTTGTGTTTATTGGGGTTTAAATAAAACCAATAAACTGTAAAAAC



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**FIGURE 4032**

GTAGCGGGAGCGGAGAGCGGACCCCAGAGAGCCCTGAGCAGCCCCACCGCCGCCCGGCCTAGTTACCGTCACA  
CCCCGGGAGGAGCCGCAGCTGCCGCAGCCGGCCGCGAGTCACCATCACCGBAACCATGAGCAGCGAGGCCGAGACC  
CAGCAGCCGCCCGCCGCCCCCGCCCTCAGCGCCGCCGACACCAAGCCCGGCACTACCGGCAGCGGCGCAGGGAGC  
GGTGGCCCGGGCGGCCCTCACATCGGCGGCGCCTGCCGGCGGGCACAAAAAGGTCATCGCAACGAAGGTTTTGGGA  
ACGGTAAAATGGTTCAATGTAAGGAACGGATATGGTTTCATCCACAGGAACGACACCAAGGAAGATGTATTTGTA  
CACCACACTGCCATGAAGAAGAATAACCCAGGAAGTACCTTCGCAGTGTAGGAGATGGAGAGACTGTGGAGTTT  
GATGTTGTTGAAGGAGAAAAGGGTGCGAAGGCAGCAAATGTTACAGGTCCTGGTGGTGTTCAGTTCAAGGCAGT  
AAATATGCAGCAGACCGTAACCATTTATAGACGCTATCCACGTCTTAGGGGTCTCCACGCAATTACCAGCAAAAT  
TACCAGAATAGTGAGAGTGGGGAAAAGAACGAGGGATCGGAGAGTGCTCCCGAAGGCCAGGCCAACAACGCCGG  
CCCTACCGCAGGCGAAGGTTCCACCTTACTACATGCGGAGACCCTATGGGCGTCGACCACAGTATTCCAACCCCT  
CCTGTGCAGGGAGAAGTGATGGAGGGTGCTGACAACCAGGGTGCGAGGAGAACAAGGTAGACCAGTGAGGCAGAAT  
ATGTATCGGGGATATAGACCACGATTCCGCAGAGGCCCTCCTCTCAAAGACAGCCTAGAGAGGACGGCAATGAA  
GAAGATAAAGAAAATCAAGGAGATGAGACCAAGGTCAGCAGCCACCTCAACGTCGGTACCGCCGCAACTTCAAT  
TACCGACGCCGACGCCAGAAAACCCCTAAACCACAAGATGGCAAAGAGACAAAAGCAGCCAATCCACCAGCTGAG  
AATTCGTCCGCTCCCGAGGCTGAGCAGGGCGGGGCTTGAGTAAATGCCGGCTTACCATCTCTACCATCATCCGGT  
TTAGTCATCCAACAAGAAGAAATAATGAAATTCAGCAATAAGAAATGAACAAAAGATTGGAGCTGAAGACCTTA  
AATGCTTGCATTTTGGCCGTTGACCAGATAAATAGATCTGCATTATCTATGCAGCATGGGGTTTTTATTATTTTT  
ACCTAAAGACGTCTCTTTTGGTAATAACAAACGTGTTTTTTAAAAAAGCCTGGTTTTTCTGAATACGCCTTTAA  
AGG

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**FIGURE 4033**

AAGAATAACCCCAGGAAGTACCTTCGCAATTCCAACCCTCCTGTGCAGGGAGAAGTGATGGAGGGTGCTGACAAC  
CAGGGTGCAGGAGACAAGGTAGACCAGTGAGGCAGAATATGTATCGGGGATATAGACCACGATTCCGCAGAGGC  
CCTCCTCTCCAAAGACAGCCTAGAGAGGACGGCAATGAAGAAGATAAAGAAAATCAAGGAGATGAGACCCAAGGT  
CAGCAGCCACCTCAACGTCGGTACCGCCGCAACTTCAATTACCGACGCCGACGCCCAGAAAACCCTAAACCACAA  
GATGGCAAAGAGACAAAAGCAGCCAATCCACCAGCTGAGAATTCGTCCGCTCCCGAGGCTGAGCAGGGCGGGGCT  
TGAGTAAATGCCGGCTTACCATCTCTACCATCATCCGGTTTAGTCATCCAACAAGAAGAAATAATGAAATTCCAG  
CAATAAGAAATGAACAAAAGATTGATCTGCATTATCTATGCAGCATGGGGTTTTTATTATTTTACCTAAAGACG  
TCTCTTTTTGGTAATAACAAACGTGTTTTTT

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**FIGURE 4034**

CGGGAGCGGAGAGCGGACCCAGAGAGCCCTGAGCAGCCCCACCGCCGCCGCCGCTAGTTACCGTCACACCCC  
GGGAGGAGCCGCAGCTGCCGCAGCCGCCGCGAGTCACCATCACCGCAACCATGAGCAGCGAGGCCGAGACCCAGC  
AGCGCGGCGCCTGCCGGCGGGCACAAAAAGGTCATCGCAACGAAGGTTTTGGGAACGGTAAATGGTTCAATGTA  
AGGAACGGATATGGTTTCATCCACAGGAACGACACCAAGGAAGATGTATTTGTACACCACACTGCCATGAAGAAG  
AATAACCCAGGAAGTACCTTCGCAGTGTAGGAGATGGAGAGACTGTGGAGTTTGATGTTGTTGAAGGAGAAAAG  
GGTGCGAAGGCAGCAAATGTTACAGGTCCTGGTGGTGTTCCAGTTCAAGGCAGTAAATATGCAGCAGACCGTAAC  
CATTATAGACGCTATCCACGTCCTAGGGGTCCTCCACGCAATTACCAGCAAATTACCAGAATAGTGAGAGTGGG  
GAAAAGAACGAGGGATCGGAGAGTGCTCCCGAAGGCCAGGCCCAACAACGCCGGCCCTACCGCAGGCCGAAGGTTT  
CCACCTTACTACATGCGGAGACCCCTATGGGCGTCGACCACAGTATTCCAACCCTCCTGTGCAGGGAGAAGTGATG  
GAGGGTGCTGACAACCAGGGTGCAGGAGAACAAGGTAGACCAGTGAGGCAGAATATGTATCGGGGATATAGACCA  
CGATTCCGCAGAGGCCCTCCTCTCCAAAGAC

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**FIGURE 4035**

GCAGAGCGCGGGGAAGGCGCACCTGGGGTGGCCCTGGCGTGCGGGCGGCGACATCGAGGACGGCGTGCTCAAGGA  
GGGCTTCCTGGTCAAGAGGGGCCACATTGTCCACAACCTGGAAGGCGCGATGGTTCATCCTTCGGCAGAACACGCT  
GGTGTACTACAAGCTTGAGGGGGGTGCGAGAGTGACCCCTCCCAAGGGCCGGATCCTCCTGGATGGCTGCACCAT  
CACCTGCCCCTGCTGGAGTATGAAAACCGACCGCTCCTCATTAAAGCTGAAGACTCAAACATCCACGGAGTACTT  
CCTGGAGGCTGTTCGAGAGGAGCGGGATGCCTGGGCCTTTGAGATCACCGGGGCTATTATGCAGGGCAGCC  
GGGAAGGTCCAGCAGCTGCACAGCCTGAGAACTCCTTCAAGCTGCCCCCGCACATCAGCCTGCATCGCATTGT  
GGACAAGATGCACGATAGCAACACCGGAATCCGTTCAAGCCCCAACATGGAGCAGGGAAGCACCTATAAAAAGAC  
CTTCCTCGGCTCCTCCCTGGTGGACTGGCTCATCTCCAACAGCTTCACGGCCAGCCGTCTGGAGGCGGTGACCCT  
GGCCTCCATGCTCATGGAGGAGAACTTCCTCAGGCCTGTGGGTGTCCGAAGCATGGGAGCCATTTCGCTCTGGGGA  
TCTGGCCGAGCAGTTCCTGGATGACTCCACAGCCCTGTACACTTTTGCTGAGAGCTACAAAAGAAGATAAGCCC  
CAAGGAAGAAATTAGCCTGAGCACTGTGGAGTTAAGTGGCACGGTGGTGAAACAAGGCTACCTGGCCAAGCAGGG  
ACACAAGAGGAAAACTGGAAGGTGCGTCGCTTTGTTCTAAGGAAGGATCCAGCTTTCCTGCATTACTATGACCC  
TTCCAAAGAAGAGAACAGGCCAGTGGGTGGGTTTTCTCTTCGTGGTTCACCTCGTGTCTGCTCTGGAAGATAATGG  
CGTTCCCACTGGGGTTAAAGGAATGTCCAGGGAAACCTCTTCAAAGTGATTACTAAGGATGACACACACTATTA  
CATTAGGCCAGCAGCAAGGCTGAGCGAGCCGAGTGGATTGAAGCTATCAAAAAGCTAACATGACAAGGACCTGA  
GGGAACCAGGATTCTTCCCTCCTACCAGATGACACAGACAAGAGTTCCTGGAGAATGGGAGTGTTAAGACTTTTG  
ACTTCTTTGTAAGTTTTGTACTGCTTTGGAGAGTGAATGCTGCCAAGAGTTCCTCAGATTACAAACAGCAGTGGT  
GCCATTTCTTCCCCATCTTCATGTTACAAACCTGGAAAGGCTAGAACAGCCATTAGGCGTCAGCATCTTGACTT  
TTCCCCAGCATCACAAACAGCCATTTCTTCGGGCACCAAAGTAGGTTCCTTTGTGGAACAATTACACTGGCCA  
TGCCATAATGTTGAATAAACTCTCTTCTTATGAGAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4036**

MEDGVLKEGFLVKRGHIVHNWKARWFILRQNTLVYYKLEGGRVTPPKGRILLDGCITITCPCLEYENRPLLIK  
TQTSTEFLEACSREERDAWAFEITGAIHAGQPGKVQQLHSLRNSFKLPPHISLHRIVDKMHDSNTGIRSSPNME  
QGSTYKKTFLGSSLVDWLISNSFTASRLEAVTLASMLMEENFLRPVGVRSMGAIRSGDLAEQFLDDSTALYTF  
SYKKKISPKEEISLSTVELSGTVVKQGYLAKQGHKRKNWKVRRFVLRKDP AFLHYDPSKEENRPVGGFSLRGS  
VSALEDNGVPTGVKGNVQGNLFKVITKDDTHYYIQASSKAERAEWIEAIKKLT

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**FIGURE 4037**

GCTGGAGCATCCCGCTCTGGTGCCGCTGCAGCCGGCAGAGATCGTTGAGCTCATGTTCCCGCTGTTGCTCCTCCT  
TCTGCCCTTCCTTCTGTATATGGCTGCGCCCCAAATCAGGAAAATGCTGTCCAGTGGGGTGTGTACATCAACTGT  
TCAGCTTCCTGGGAAAGTAGTTGTGGTCACAGGAGCTAATACAGGTATCGGGAAGGAGACAGCCAAAGAGCTGGC  
TCAGAGAGGAGCTCGAGTATATTTAGCTTGCCGGGATGTGAAAAGGGGGAATTGGTGGCCAAAGAGATCCAGAC  
CACGACAGGGAACCAGCAGGTGTTGGTGCGGAAACTGGACCTGTCTGATACTAAGTCTATTCGAGCTTTTGCTAA  
GGGCTTCTTAGCTGAGGAAAAGCACCTCCACGTTTTGATCAACAATGCAGGAGTGATGATGTGTCCGTACTCGAA  
GACAGCAGATGGCTTTGAGATGCACATAGGAGTCAACCACTTGGGTCACCTCCTCCTAACCCATCTGCTGCTAGA  
GAACTAAAGGAATCAGCCCCATCAAGGATAGTAAATGTGTCTTCCCTCGCACATCACCTGGGAAGGATCCACTT  
CCATAACCTGCAGGGCGAGAAATTCTACAATGCAGGCCTGGCCTACTGTACAGCAAGCTAGCCAACATCCTCTT  
CACCCAGGAAC TGGCCCGGAGACTAAAAGGCTCTGGCGTTACGACGTATTCTGTACACCCTGGCACAGTCCAATC  
TGAAC TGGTTCGGCACTCATCTTTTCATGAGATGGATGTGGTGGCTTTTCTCCTTTTTCATCAAGACTCCTCAGCA  
GGGAGCCCAGACCAGCCTGCAC TGTGCCTTAACAGAAGGTCTTGAGATTCTAAGTGGGAATCATTTCAAGTACTG  
TCATGTGGCATGGGTGTCTGTCCAAGCTCGTAATGAGACTATAGCAAGGCGGCTGTGGGACGTGAGTTGTGACCT  
GCTGGGCCTCCCAATAGACTTAACAGGCAGTGCCAGTTGGACCCAAGAGAAGACTGCAGCAGACTACACAGTACTT  
CTTGTCAAAATGATTCTCCTTCAAGGTTTTCAAAACCTTTAGCACAAAGAGAGCAAAACCTTCCAGCCTTGCCTG  
CTTGGTGTCCAGTTAAAACTCAGTGTACTGCCAGATTCGTCTAAATGTCTGTATGTCCAGATTTACTTTGCTTC  
TGTTACTGCCAGAGTTACTAGAGATATCATAATAGGATAAGAAGACCCTCATATGACCTGCACAGCTCATTTTCC  
TTCTGAAAGAACTACTACCTAGGAGAACTAAGCTATAGCAGGGATGATTTATGCAAATTTGAACTAGCTTCTT  
TGTTCACAATTCAGTTCCCTCCCAACCAACCACTCTTCACTTCAAGAGGGCCACACTGCAACCTCAGCTTAACATG  
AATAACAAAGACTGGCTCAGGAGCAGGGCTTGCCAGGCATGGTGGATCACCGGAGGTGAGTAGTTCAAGACCAG  
CCTGGCCAACATGGTGAAACCCACCTCTACTAAAAATGTGTATATCTTTGTGTCTTCTGTTTATGTGTGC  
CAAGGGAGTATTTTCAAAAGTTCAAAACAGCCACAATAATCAGAGATGGAGCAAACCAAGTCCATCCAGTCTTT  
ATGCAAATGAAATGCTGCAAAGGGAAGCAGATTCTGTATATGTTGGTAACTACCCACCAAGAGCACATGGGTAGC  
AGGGAAGAAGTAAAAAAGAGAAGGAGAATACTGGAAGATAATGCACAAAAATGAAGGGACTAGTTAAGGATTAAC  
TAGCCCTTTAAGGATTAAGTAAAGGATTAATAGCAAAAGATATTAATATGCTAACATAGCTATGGAGGAAT  
TGAGGGCAAGCACCAGGACTGATGAGGTCTTAACAAAAACCAAGTGTGGCAAAAAAAAAAAAAAAAAAAAAAA  
AAAAATCCTAAAAACAAACAAACAAAAAACAATTCTTCATTGAGAAAAATATCTTAGGGACTGATATTGGTA  
ATTATGGTCAATTTAATAATATTTTGGGGCATTTCCTTACATTGTCTTGACAAGATTAAATGTCTGTGCCAAAA  
TTTTGTATTTTATTTGGAGACTTCTTATCAAAAGTAATGCTGCCAAAGGAAGTCTAAGGAATTAGTAGTGTCCC  
ATCACTTGTTTGGAGTGTGCTATTCTAAAAGATTTTGATTTCCCTGGAATGACAATTATATTTTAACTTTGGTGGG  
GGAAAGAGTTATAGGACCACAGTCTTCACTTCTGATACTTGTAATAATCTTTTATTGCACTTGTTTTGACCAT  
TAAGCTATATGTTTAGAAATGGTCATTTTACGGAAAAATTAGAAAAATTTCTGATAATAGTGCAGAATAAATGAAT  
TAATGTTTTTACTTAATTTATATTGAAGTGTCAATGACAAATAAAAAATTCCTTTTGATTATTTTGTTCATT  
ACCAGAATAAAAACTAAGAATTAAAAGTTTGATTACAGTCAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4038**

MVELMFPLLLLLLPFLLYMAAPQIRKMLSSGVCTSTVQLPGKVVVVTGANTGIGKETAKELAQRGARVYLACRDV  
EKGELVAKEIQTTTGNQQVLVRKLDLSDTKSIRAFAGFLAEEKHLHVLINNAGVMMCPYSKTADGFEMHIGVNH  
LGHFLLTHLLEKLKESAPSRIVNVSSLAHHLGRIHFHNLQGEKFYNAGLAYCHSKLANILFTQELARRLKSGV  
TTYSVHPGTVQSELVRHSSFMRMMWWLFSFFIKTPQQAQTSLHCALTEGLEILSGNHFSDCHVAWVSQARNET  
IARRLWDVSCDLLGLPID

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**FIGURE 4039**

GAAGCCATAGTCGGCGAGCAACGCTGGAGCATCCCGCTCTGGTGCCGCTGCAGCCGGCAGAGATGGTTGAGCTCA  
TGTTCCCGCTGTTGCTCCTCCTTCTGCCCTTCTTCTGTATATGGCTGCGCCCCAAATCAGGTCTGTGCAAATGT  
ATTGCCCTTCTTTGAGAATTCTTGTGCGGGGCGGGAGGGAAACATAGAATCCCCACCAAAGCTTTCTTGAAAA  
CTCCCCTGGGGGGGCTCCAAGATGGCGGAGCCAGAGTTCGGTGGGTGGAGGCGAGGTCCAGCTGTCCTGGGTG  
CCAGGAGGACACCCGAGACCCAGGCGGTGAGAAAGGGCGGCAGTCCGGGGCACACTGCTTTTCCCTGGCCTGTT  
TTTCTTTTGTCTAAGCACCCCTGATTCTGGCTCCAGGGAATCCCGAGGGTAAGGCTACCTCAAACGCTTGAGTT  
TCGGACTCTTCAATGGGATATGGCCGACGCTGTTTTCCCTTATTCCCCACGCCTTAAACCAGCCTTCGAGGTA  
CAAAGGAGCGATTCCACATTCGCCCTCTGAACTGATAGCAATCGTAACATCTGCGGCCCCATCCTTGCTCTCT  
CGTTGCTGTTACAATCGCTTGTCTGTGGGCGGATGTTGTAAAGGAGAAAAGTGAAAAGGAAGAGTGTTGGTTA  
TGAGCTCTATCCTGCCTTGGAGCAGGAGCACGGGGGATCTGAGTTAGGAGCTAGGGTACTGGGGCGGTGAGGGC  
TGGGAGAATGGTGGGAAGGTATTGACCAGGTGATAGATCAATCAGCCCAAGGCTGGCCAAGTGCCCCAGTGAATC  
AGCAGCGGGCTGTAAAACCGGCAGCCTGCTTATTGGTCTAAGTAAATCACCAGTGGTGACGGACCAGTGACTGA  
ATAGACAGACACACTCCTTCCCCAGGTGGGCGGTCTTAGTCCCAATAGAACTGAAGCCAGGCCAGATCACAGTC  
ATTTCTTACCACAGTCACCTACTTTCCTTCTTTTATTTTTATTTTCTCTTCTTCTCTGGTGCCCTCTTCCAGT  
TATATTTTTCTGCCTTCTGAACACTCAGTTCTCCACCTCTAGGCACACATGGTTTCTCACACTCAGATGAAAA  
CACTGCTTTTTATCTTTTTTCACTACAAGATCCTCTTATCCACATAGAATCTCAATGAAAAGTTGAACCAGAAC  
TGAAAATAGTGCTCATACCCAGAGGGATTTTCTGGAAAAAATATATGTGTGTATATATATATATATATA  
TGTGTGTGTGTATATATATATATGTGTGTGTGTGTATATATATATATATATATATATTCCAGGAGCTGTATTC  
CCAACCTCAGCAGGGTTATGGGAGTCGGGCCAGAGCTGGACTTTTATAGTTGTCTCTTTCATTCTGCTGGTTAAG  
GAGAAGAAAGAACTAAGTACAGGTCCTACTAAGTTGTCACTCCTGGAGCTACATACAGTAAGGGGATGTGGGAAA  
CAGCCTAGAGGCTTGTTTTCTGAGGAGGGAGGTGATGGTTTGTGGGGACCATGAGTTAATCTGCCTCCCTGTCAG  
CATTTTCGCACATATGCAGGTAGCTTCAATGGCTAAGAGTATGTACCTTGCAATTCCTAAGTTCAATGAAAAGGCT  
GAAATGCTCTTTAAGAATGCATCTCCTGGTCAACAGATTGTTTAAACCAGAGTCCCAACATTGCCAAGAAGAGAA  
TAGGCCAGTCTGAGAACCACCAATCTGTGTTTGTGCATTTCATTGTTGGAAAAGGCAATATAGTATAGTACTTA  
GAAACAAGCACTCTAGGCTGGGCTTGGTGACTCACACCTGTAATCCAGCACTTGGGAGGCTGAGGTGGGCGGA  
TCACCTGAGGTCAGGAGTTCGAGACCATCTGGCCAGCGTGGTGAAACCCTGTCTCTACTAAAAATACAAAAATT  
AGCTGGGCGTGGTGGCGCATGGGTGAGGGGTGAGGGATGAGAATCGCTTGAACCTGGGAGATGGGGGTTCAGT  
GGAGGTGGAGGTTGCAGTGAGCCGAGATCACACATTGCACTCCAGCCTGGGCAACAAGAGCAAACTCTGTCTC



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**FIGURE 4040**

CGCTGTCGCCGCCAGTAGCAGCCTTCGCCAGCAGCGCCGCGGCGGAACCGGGCGCAGGGGAGCGAGCCCCGGCCCC  
GCCAGCCCAGCCCAGCCCAGCCCTACTCCCTCCCCACGCCAGGGCAGCAGCCGTTGCTCAGAGAGAAGGTGGAGG  
AAGAAATCCAGACCCTAGCACGCGCGCACCATCATGGACCATTATGATTCTCAGCAAACCAACGATTACATGCAG  
CCAGAAGAGGACTGGGACCGGGACCTGCTCCTGGACCCGGCCTGGGAGAAGCAGCAGAGAAAGACATTACGGCA  
TGGTGTAATCCCACCTCCGGAAGGCGGGGACACAGATCGAGAACATCGAAGAGGACTTCCGGGATGGCCTGAAG  
CTCATGCTGCTGCTGGAGGTCTCTCAGGTGAACGCTTGGCCAAGCCAGAGCGAGGCAAGATGAGAGTGCACAAG  
ATCTCCAACGTCAACAAGGCCCTGGATTTCATAGCCAGCAAAGGCGTCAAACCTGGTGTCCATCGGAGCCGAAGAA  
ATCGTGGATGGGAATGTGAAGATGACCCCTGGGCATGATCTGGACCATCATCTGCGCTTTGCCATCCAGGACATC  
TCCGTGGAAGAGACTTCAGCCAAGGAAGGGCTGCTCCTGTGGTGTGAGAGAAAGACAGCCCCCTTACAAAAATGTC  
AACATCCGAAGTTCACATAAGCTGGAAGGATGGCCTCGGCTTCTGTGCTTTGATCCACCGACACCGGCCCGAG  
CTGATTGACTACGGGAAGCTGCGGAAGGATGATCCACTCAGAAATCTGAATACGGCTTTTGACGTGGCAGAGAAG  
TACCTGGACATCCCCAAGATGCTGGATGCCGAAGACATCGTTGGAAGTGGCCGACCGGATGAGAAAGCCATCATG  
ACTTACGTGTCTAGCTTCTACCACGCTTCTCTGGAGCCCAGAAGGCGGAGACAGCAGCCAATCGCATCTGCAAG  
GTGTTGGCCGTCAACCAGGAGAACGAGCAGCTTATGGAAGACTACGAGAAGCTGGCCAGTGATCTGTTGGAGTGG  
ATCCGCCGCACAATCCCGTGGCTGGAGAACCGGGTGGCCGAGAACACCATGTCATGCCATGCAACAGAAGCTGGAG  
GACTTCCGGGACTACCGGCGCTGCACAAGCCGCCAAGGTGCAGGAGAAGTGCCAGCTGGAGATCAACTTCAAC  
ACGCTGCAGACCAAGCTGCGGCTCAGCAACCGGCTGCCCTTCATGCCCTCTGAGGGCAGGATGGTCTCGGACATC  
AACAATGCCTGGGGCTGCTGGAGCAGGTGGAGAAGGGCTATGAGGAGTGGTTGCTGAATGAGATCCGGAGGCTG  
GAGCGACTGGACCACCTGGCAGAGAAGTTCGGGCAGAAGGCTCCATCCACGAGGCTGGACTGACGGCAAAGAG  
GCCATGCTGCGACAGAAGGACTATGAGACCGCCACCCTCTCGGAGATCAAGGCCCTGCTCAAGAAGCATGAGGCC  
TTCGAGAGTGACCTGGCTGCCCACCAGGACCGTGTGGAGCAGATTGCCGCCATCGCACAGGAGCTCAATGAGCTG  
GACTATTATGACTCACCCAGTGTCAACGCCCGTTGCCAAAAGATCTGTGACCAGTGGGACAATCTGGGGGCCCTA  
ACTCAGAAGCGAAGGGAAGCTCTGGAGCGGACCGAGAACTGCTGGAGACCATTGACCAGCTGTACTTGGAGTAT  
GCCAAGCGGGCTGCACCCTTCAACAAGTGGATGGAGGGGGCCATGGAGGACCTGCAGGACACCTTCATTGTGCAC  
ACCATTGAGGAGATCCAGGGACTGACCACAGCCCATGAGCAGTTCAAGGCCACCCTCCCTGATGCCGACAAGGAG  
CGCTGGCCATCTTGGGCATCCACAATGAGGTGTCCAAGATTGTCCAGACCTACCACGTCAATATGGCGGGCACC  
AACCCTTACACAACCATCACGCTCAGGAGATCAATGGCAAATGGGACCAGTGCGGCAGCTGGTGCCTCGGAGG  
GACCAAGCTCTGACGGAGGAGCATGCCGACAGCAGCACAATGAGAGGCTACGCAAGCAGTTTGGAGCCCAGGCC  
AATGTCATCGGGCCCTGGATCCAGACCAAGATGGAGGAGATCGGGAGGATCTCCATTGAGATGCATGGGACCCTG  
GAGGACCAGCTCAGCACCTGCGGCAGTATGAGAAGAGCATCGTCAACTACAAGCCAAGATTGATCAGCTGGAG  
GGCGACCACCAGCTCATCCAGGAGGCGCTCATCTTCGACAACAAGCACACCAACTACACCATGGAGCACATCCGT  
GTGGGCTGGGAGCAGCTGCTCACCACCATCGCCAGGACCATCAATGAGGTAGAGAACCAGATCCTGACCCGGGAT  
GCCAAGGGCATCAGCCAGGAGCAGATGAATGAGTTCGGGCTCCTTCAACCACTTTGACCGGGATCACTCCGGC  
ACACTGGGTCCCAGAGGAGTTCAAAGCCTGCCTCATCAGCTTGGGTTATGATATTGGCAACGACCCCCAGGGAGAA  
GCAGAATTTGCCGAGATCATGAGCATTGTGGACCCCAACCGCCTGGGGGTAGTGACATTCCAGGCCTTCATTGAC  
TTCATGTCCCGGAGACAGCCGACAGATACAGACAGCAAGTCAATGGCTTCCTTCAAGATCCTGGCTGGGGAC  
AAGAACTACATTACCATGGACGAGCTGCGCCGCGAGCTGCCACCCGACAGGCTGAGTACTGCATCGCGCGGATG  
GCCCCCTACACCGGCCCCGACTCCGTGCCAGGTGCTCTGGACTACATGTCCTTCTCCACGGCGCTGTACGGCGAG  
AGTGACCTCTAATCCACCCCGCCGCGCCCTCGTCTTGTGCGCCGTGCCCTGCTTGCACCTCCGCGCTCGCC  
CATCTCCTGCTGGGTTGCGTTTTCAGCTCCAGCCTCCACCGGGTGAGCTGGGGCCCACGTGGCATCGATCCTC  
CCTGCCCGCAAGTGACAGTTTACAAAATTATTTTCTGCAAAAAAGAAAAAAAGTTACGTTAAAAACCAAAAA  
CTACATATTTTATTATAGAAAAAGTATTTTTCTCCACAGACAAATGAAAAAAAGAGGAAAGATTAACATATT  
GCACCGAAATGCTTGTGTTTGTGCGACATAGAAAAATAACCAAGCACAAAGTTATATTCCATCCTTTTTACTGA  
TTTTTTTTTCTTCTATCTGTTCCATCTGCTGATTCAATTTCTCAATCTCATGTCCATTTTGGTGTGGGAGTCGG  
GGTAGGGGGTACTCTTGTCAAAAGGCACATTGGTGCGTGTGTTTGTCTAGCTCACTTGTCCATGAAAATATTTT  
ATGATATTAAAGAAAATCTTTTG

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**FIGURE 4041**

MDHYDSQQTNDYMQPEEDWDRDLLLDPaweKQQRKtTAWCNSHLRKAGTQIENIEEDFRDGLKMLLLEVISGE  
RLAKPERGKMRVHKISNVNKALDFIASKGVKLVSIGAEIIVDGNVKMTLGMiWTiILRFAIQDISVEETSAKEGL  
LLWCQRKTAPYKNVNIQNFHISWKDGLGFCALIHRRPELIDYGKLRKDDPLTNLNTAFDVAEKYLDIPKMLDAE  
DIVGTARPDEKAIMTYVSSFYHAFSGAQKAETAANRICKVLAVNQENEQLMEDYEKLASDLLEWIRRTIPWLENR  
VPENTMHAMQOKLEDFRDYRRLHKPPKVQEKQCLEINFNTLQTKLRLSNRPAFMPSEGRMVSDINNAWGCLEQVE  
KGYEEWLLNEIRLERLDHLAEKFRQKASIHEAWTDGKEAMLRQKDYETATLSEIKALLKKHEAFESDLAAHQDR  
VEQIAAIAQELNELDYDPSVSNARCQKICDQWDNLGALTQKRREALERTEKLETTIDQLYLEYAKRAAPFNWWM  
EGAMEDLQDTFIVHTIEEIQGLTTAHEQFKATLPDADKERLAILGIHNEVSKIVQTYHVN MAGTNPYTTITPQEI  
NGKWDHVRQLVPRRDQALTEEHARQQHNERLRKQFGAQANVIGPWIQTKMEEIGRISIEMHGTLEDQLSHLRQYE  
KSIVNYKPKIDQLEGDHLIQEALIFDNKHTNYTMEHIRVGWEQLLTTIARTINEVENQILTRDAKGISQEQMNE  
FRASFNHFD RDHSGTLGP EEFKACLISLGYDIGNDPQGEAEFARIMSI VDPNRLGVVTFQAFIDFMSRETADTDI  
ADQVMASFKILAGDKNYITMDELRRRELPPDQAEYCIARMAPYTGPD SVP GALDYMSFSTALYGESDL

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**FIGURE 4042**

GCCTGCTGCCGCTGGGCCCCGCCGAGCGGAGCTAGCGCCGCGCGCAGAGCACACGCTCGCGCTCCAGCTCCCCCT  
CCTGCGCGGTTTCATGACTGTGTCCCCTGACCGCAGCCTCTGCGAGCCCCCGCCGAGGACCACGGCCCCGCTCCCC  
GCCGCCGCGAGGGCCCCGAGCGAAGGAAGGAAGGGAGGCGCGCTGTGCGCCCCGCGGAGCCCCGGAACCCCCGCTC  
GCTGCCGGCTGCCAGCCTGGCTGGCACC**ATG**CTGCCCGCGCGCTGCGCCCCGCTGCTACGCCCCACTTGCTGC  
TGGTGTGGTGCAGCTGTCCCCTGCTCGCGCCACCGCACCCACAGGCCCCAGGTTTCTAATAAGTGACCGTGACC  
CACAGTGCAACCTCCACTGCTCCAGGACTCAACCCAAACCCATCTGTGCCCTCTGATGGCAGGTCTACGAGTCCA  
TGTGTGAGTACCAGCGAGCCAAGTGCCGAGACCCGACCTGGGCGTGGTGATCGAGGTAGATGCAAAGATGCTG  
GCCAGAGCAAGTGTCGCTGGAGCGGGCTCAAGCCCTGGAGCAAGCCAAGAAGCCTCAGGAAGCTGTGTTTGTCC  
CAGAGTGTGGCGAGGATGGCTCCTTTACCCAGGTGCAGTGCCATACTTACACTGGGTACTGCTGGTGTGTACCCC  
CGGATGGGAAGCCCATCAGTGGCTCTTCTGTGCAGATAAACTCCTGTATGTTTCAGGTTTCAGTCACCGACAAGC  
CCTTGAGCCAGGGTAACCTCAGGAAGGAAGATGACGGGTCTAAGCCGACACCCACGATGGAGACCCAGCCGGTGT  
TCGATGGAGATGAAATCACAGCCCCAACTCTATGGATTAAACACTTGGTGATCAAGGACTCCAACTGAACAACA  
CCACATAAGAAATTCAGAGAAAGTCTATTCTGTGACCAAGGAGAGGCAGAGTGCCCTGGAAGAGGGCCAGCAGA  
ATCCCCGTGAGGGTATTGTCTATCCCTGAATGTGCCCTGGGGGACTCTATAAGCCAGTGCAATGCCACAGTCCA  
CTGGCTACTGCTGGTGTGTGCTGGTGGACACAGGGCGCCGCTGCCTGGGACCTCCACACGCTACGTGATGCCCCA  
GTTGTGAGAGCGACGCCAGGGCCAAGACTACAGAGGCGGATGACCCCTTCAAGGACAGGGAGCTACCAGGCTGTC  
CAGAAGGGAAGAAATGGAGTTTATCACCAGCCTACTGGATGCTCTCACCCTGACATGGTTTCAGGCCATTAACCT  
CAGCAGCGCCCACTGGAGGTGGGAGGTTCTCAGAGCCAGACCCAGCCACACCCCTGGAGGAGCGGGTAGTGCACCT  
GGTATTTTCAGCCAGCTGGACAGCAATAGCAGCAACGACATTAACAAGCGGGAGATGAAGCCCTTCAAGCGCTACG  
TGAAGAAGAAAGCCAAGCCCCAAGAAATGTGCCCCGGCTTTCACCGACTACTGTGACCTGAACAAAGACAAGGTCA  
TTTCACTGCCTGAGCTGAAGGGCTGCCTGGGTGTTAGCAAAGAAGGACGCCTCGTCT**TAAGG**AGCAGAAAACCCAA  
GGGCAGGTGGAGAGTCCAGGGAGGCAGGATGGATCACCAGACACCTAACCTTCAGCGTTGCCCATGGCCCTGCCA  
CATCCCGTGTAACATAAGTGGTGGCCACCATGTTTGCACTTTTAATAACTCTTACTTGCGTGTGTTTGTGTTTGGT  
TTCATTTTAAACACCAATATCTAATACCACAGTGGGAAAAGGAAAGGGAAGAAAGACTTTATCTCTCTCTTAT  
TGTAAGTTTTTGGATCTGCTACTGACAACTTTTAGAGGGTTTTGGGGGGTGGGGGAGGGTGTGTTGGGGCCCTG  
AGAAGAAAGAGATTTATATGCTGTATATAAATATATATGTAAATTGTATAGTTCITTTGTACAGGCATTGGCATT  
GCTGTTTGTGTTATTTCTCTCCCTCTGCCTGCTGTGGGTGGTGGGCACTCTGGACACATAGTCCAGCTTTCTAAAA  
TCCAGGACTCTATCCTGGGCCTACTAACTTCTGTTTGGAGACTGACCCTTGTTGTATAAAGACGGGAGTCCCTGCA  
ATTGTACTGCGGACTCCACGAGTTCTTTCTGGTGGGAGGACTATATTGCCCCATGCCATTAGTTGTCAAATTG  
ATAAGTCACTTGGCTCTCGGCCTTGTCAGGGAGGTTGGGCTAAGGAGAGATGGAAGTCCCTGGGAGAGGAAG  
GGAGTCCAGATCCCATGAATAGCCACACAGGTACCGGCTCTCAGAGGGTCCGTGCATTCTCTGCTCTCGGACCC  
CCAAAGGGCCAGCATTGGTGGGTGCACCACTATCTTAGTGACCCCTCGGAGCAAATTATCCACAAAGGATTTGCA  
TTACGTCACTCGAAACGTTTTTCATCCATGCTTAGCATCTACTCTGTATAACGCATGAGAGGGGAGGCAAGAAGA  
AAAGGACACACGGAAGGGCCTTTAAAAAAGTAGATATTTAATATCTAAGCAGGGGAGGGGACAGGACAGAAAGCC  
TGCCTGAGGGGTGCGGTGCCAACAGGGAAACTCTTACCTCCCTGCAAACCTACCAGTGAGGCTCCAGAGACG  
CAGCTGTCTCAGTGCCAGGGGCAGATTGGGTGTGACCTCTCCA

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**FIGURE 4043**

MLPARCARLLTPHLLLVLVQLSPARGHRTTGPRFLISDRDPQCNLHCSRTQPKPICASDGRSYESMCEYQRAKCR  
DPTLGVVHRGRCKDAGQSKRLERAQALEQAKKPQEAFFVPECGEDGSFTQVQCHTYTGYCWCVTPDGKPISGSS  
VQNKTPVCSGSVTDKPLSQGNSGRKDDGSKPTPTMETQPVFDGDEITAPTLWIKHLVIKDSKLNNTNIRNSEKVY  
SCDQERQSALEEAQQNPREGIVIECAPGGGLYKPVQCHQSTGYCWCVLVDGTGRPLPGTSTRYVMPSCESDARAKT  
TEADDPFKDRELPGCPEGKKMEFITSLLDALTDMVQAINSAAPTGGGRFSEPDPSHTLEERVVHWYFSQLDSNS  
SNDINKREMKPFKRYVKKKAKPKKCARRFTDYCDLNKDKVISLPKLGCLGVSKEGRLV

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**FIGURE 4044**

AAGATGCCGAAAGGAAAGAAGGCCAAGGGAAAGAAGGTGGCTCCGGCCCCAGCTGTCGTGAAGAAGCAGGAGGCT  
AAGAAAGTGGTGAATCCCCTGTTTGAGAAAAGGCCTAAGAATTTTGGCATTGGACAGGACATCCAGCCCCAAAAGA  
GACCTCACCCGCTTTGTGAAATGGCCCCGCTATATCAGGTTGCAGCGGCAGAGAGCCATCCTCTATAAGCGGCTG  
AAAGTGCCCTCCTGCGATTAAACCAGTTCACCCAGGCCCTGGACCGCCAAACAGCTACTCAGCTGCTTAAGCTGGCC  
CACAAGTACAGGCCAGAGACAAAGCAAGAGAAGAAGCAGAGACTGTTGGCCCGGGCCGAGAAGAAAGCTGCTGGC  
AAAGGGGACGTCCCGAAGAAGAGACCACCTGTCCTTCGAGCAGGAGTTAACA CTGTCACCACCTTGGTGGAGAAC  
AAGAAAGCTCAGCTGGTGGTGATTTACACGACATGGATCCCATCGAGGGGGAAGGCAAGACTGGGACGTCTAGT  
CCACAGGAAGACCTGCACCACTGTCGCCTTCACACAGGTGAACTCAGAAGACAAAGGCGCTTTGGCTAAGCTGGT  
GGAAGCTATCAGGACCAATTACAATGACAGATACGATGAGATCCGCCGTCCTG GGGTGGCAATGTCCTGGGTCC  
TAAGTCTGTGGCTCGTATCGCCAAGCGCAAAAAGGCAAAGGCTAAAGAACTTGCCACTAAACTGGGTAAATGTA  
CACTGTTGAGTTTTCTGTACATAAAAATAATTAAATAATACAAATTTTCCTT

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**FIGURE 4045**

TGGGACAGGCAGCTCCGGGGTCCGCGGTTTCACATCGGAAACAAAACAGCGGCTGGTCTGGAAGGAACCTGAGCT  
ACGAGCCCGCGGCGGCAGCGGGGCGGGGGAAGCGTATACCTAATCTGGGAGCCTGCAAGTGACAACAGCCTTTG  
CGGTCCCTTAGACAGCTTGGCCTGGAGGAGAACACATGAAAGAAAGAACCTCAAGAGGCTTTGTTTTCTGTGAAAC  
AGTATTTCTATACAGTTGCTCCAATGACAGAGTTACCTGCACCGTTGTCTACTTCCAGAATGCACAGATGTCTG  
AGGACAACCACCTGAGCAATACTGTACGTAGCCAGAATGACAATAGAGAACGGCAGGAGCACAAACGACAGACGGA  
GCCTTGGCCACCCTGAGCCATTATCTAATGGACGACCCAGGGTAACTCCCGGCAGGTGGTGGAGCAAGATGAGG  
AAGAAGATGAGGAGCTGACATTGAAATATGGCGCAAGCATGTGATCATGCTCTTTGTCCCTGTGACTCTCTGCA  
TGGTGGTGGTCTGGCTACCATTAAGTCAGTCAGCTTTTATACCCGGAAGGATGGGCAGCTAATCTATACCCCAT  
TCACAGAAGATACCGAGACTGTGGGCCAGAGAGCCCTGCACTCAATTCTGAATGCTGCCATCATGATCAGTGTCA  
TTGTTGTCATGACTATCCTCCTGGTGGTTCTGTATAAATACAGGTGCTATAAGGTCATCCATGCCCTGGCTTATTA  
TATCATCTCTATTGTTGCTGTTCTTTTTTTTATTCTTTTACTTGGGGGAAGTGTTTAAACCTATAACGTTGCTG  
TGGACTACATTACTGTTGCACTCCTGATCTGGAATTTTGGTGTGGTGGGAATGATTTCATTCACTGGAAAGGTC  
CACTTCGACTCCAGCAGGCATATCTCATTATGATTAGTGCCCTCATGGCCCTGGTGTATCAAGTACCTCCCTG  
AATGGACTGCGTGGCTCATCTTGGCTGTGATTTTCACTATATGATTTAGTGGCTGTTTTGTGTCCGAAAGGTCCAC  
TTCGTATGCTGGTTGAAACAGCTCAGGAGAGAAATGAAACGCTTTTCCAGCTCTCATTACTCCTCAACAATGG  
TGTGGTTGGTGAATATGGCAGAAGGAGACCCGGAAGCTCAAAGGAGAGTATCCAAAAATTCCAAGTATAATGCAG  
AAAGCACAGAAAGGGAGTCACAAGACACTGTTGCAGAGAATGATGATGGCGGGTTCAGTGAGGAATGGGAAGCCC  
AGAGGGACAGTCATCTAGGGCCTCATCGCTCTACACCTGAGTCACGAGCTGCTGTCCAGGAACTTCCAGCAGTA  
TCCTCGCTGGTGAAGACCCAGAGGAAAGGGGAGTAAACTTGGATTGGGAGATTTCAATTTCTACAGTGTCTCTGG  
TTGGTAAAGCCTCAGCAACAGCCAGTGGAGACTGGAACACAACCATAGCCTGTTTCGTAGCCATATTAATTGGTT  
TGTGCCCTACATTATTACTCCTTGCCATTTTCAAGAAAGCATTGCCAGCTCTTCCAATCTCCATCACCTTTGGGC  
TTGTTTTCTACTTTGCCACAGATTATCTTGTACAGCCTTTTATGGACCAATTAGCATTCCATCAATTTTATATCT  
AGCATATTTGCGGTTAGAATCCCATGGATGTTTCTTCTTTGACTATAACAAAATCTGGGGAGGACAAAGGTGATT  
TTCCTGTGTCCACATCTAACAAAGTCAAGATTTCCGGCTGGACTTTTGCAGCTTCCTTCCAAGTCTTCTGACCA  
CCTTGCACTATTGGACTTTTGAAGGAGGTGCCATAGAAAACGATTTTGAACATACTTCATCGCAGTGGACTGTG  
TCCCTCGGTGCAGAACTACCAGATTTGAGGGACGAGGTCAAGGAGATATGATAGGCCCGGAAGTTGCTGTGCC  
CATCAGCAGCTTGACGCGTGGTCACAGGACGATTTCACTGACACTGCGAACTCTCAGGACTACCGTTACCAAGAG  
GTTAGGTGAAGTGGTTTAAACCAAACGGAACCTTCTATCTTAACTACACGTTGAAAATCAACCAATAATTCTG  
TATTAAGTGAATTCTGAACCTTTTCAAGGAGTACTGTGAGGAAGAGCAGGACCAGCAGCAGAGATGGGGAATGGAG  
AGGTGGGCAGGGGTTCCAGCTTCCCTTTGATTTTTTGTCTGCAGACTCATCCTTTTAAATGAGACTGTTTTCCC  
CTCTCTTTGAGTCAAGTCAAATATGTAGATTGCCTTTGGCAATTCTTCTTCAAGCACTGACACTCATTACCGT  
CTGTGATTGCCATTTCTTCCAAGGCCAGTCTGAACCTGAGGTGCTTTATCCTAAAAGTTTTAACCTCAGGTTT  
CAAATTCAGTAAATTTTGGAAACAGTACAGCTATTTCTCATCAATTCTCTATCATGTTGAAGTCAAATTTGGATT  
TTCCACCAAATTTCTGAATTTGTAGACATACTGTACGCTCACTTGCCCCAGATGCCTCCTCTGTCTCATTCTTC  
TCTCCACACAAGCAGTCTTTTCTACAGCCAGTAAGGCAGCTCTGTCTGGTAGCAGATGGTCCCATTATTCTA  
GGGTCTTACTCTTTGTATGATGAAAAGAATGTGTTATGAATCGGTGCTGTGAGCCCTGCTGTGAGACCTTCTTCC  
ACAGCAAATGAGATGTATGCCCAAAGACGGTAGAATTAAGAAGAGTAAATGGCTGTTGAAGC

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**FIGURE 4046**

GGCACGAGGGTAGCTTTCCAACATAAAGTGGAGGTTTCAACACAGGAGACTTTAAGCAAGTTCAGTGTGTCTAT  
ATTTGGTCTGGCTGATCGGCTGGACTCTGGCCTTCCCCGCTCACGTTAGCAGACAGCTCTGCCCTAGTGGGCGCT  
TAGCCTGCGACGGCAGCCCCGAGAGGATCTCTAACAAGCTTCTTTCTCCCCACCCCAATTCAGTTGTTCTCAGGTC  
TGAATTCAAAATGGCCTCATCTCCTGCTGTCTTCGAGCGTCCCGGCTGTACCAATGGAGCCTGAAGAGTTTCGGC  
GCAGTTCCTGGGGTCTCCACAGCTGAGGCAGGTTGGTCAGATCATTAGGGTTCCTGCTCGGATGGCGGCGACGCT  
GATCCTGGAGCCTGCGGGCCGCTGCTGCTGGGACGAACCGGTGCGAATCGCCGTGCGCGGCCTAGCCCCGGAGCA  
GCCGGTCACGCTGCGCGCGTCCCTGCGCGACGAGAAGGGCGCGCTTTTCCAGGCCACGCGCGCTACCGCGCCGA  
CACTCTTGGCGAGCTGGACCTGGAGCGCGCGCCCGCGCTGGGCGGCAGCTTCGCGGGGCTTGAGCCCCATGGGGCT  
GCTCTGGGCCCTTGGAGCCCCGAGAAACCTTTGGTGGCGCTGGTGAAGCGCGACGTGCGAACGCCCTTGGCCGTGGA  
GCTGGAGGTGCTGGATGGCCACGACCCCGACCCCGGGCGGCTGCTGTGCCAGACGCGGCACGAGCGCTACTTCCT  
CCCGCCCGGGTGCGGCGCGAGCCGCTGCGCGTGGGCGGGTGCGAGGCACGCTCTTCCTGCCGCCAGAACCTGG  
GCCCTTTCCTGGGATTGTGGACATGTTCCGAACTGGAGGTGGCCTGCTGGAGTATCGGGCTAGTCTGCTGGCTGG  
GAAGGGTTTTGCTGTGATGGCTCTGGCTTATTATAACTATGAAGACCTCCCCAAGACCATGGAGACGCTCCATCT  
GGAGTACTTTGAAGAAGCCATGAACACTTGTCTCAGTCATCCCGAGGTAAAAGGTCCAGGAGTTGGGCTGCTTGG  
AATTTCAAAGGGGGTGAGCTCTGCCTTTCCATGGCCTCTTTCTGAAGGGCATCACGGCTGCTGTCTCATCAA  
CGGCTCTGTGGCCAATGTTGGGGGAACCTTACGCTACAAGGGCGAGACCCTGCCCCCTGTGGGCGTCAACAGAAA  
TCGCATCAAGGTGACCAAAGATGGCTATGCAGACATTGTGGATGTCCTGAACAGCCCTTTGGAAGGACCTGACCA  
GAAGAGCTTCATTCTGTGGAAGGGCAGAGAGCACCTTCTGTTCTGGTAGGTCAGGATGACCACAACCTGGAA  
GAGTGAGTTCTATGCTAATGAGGCCTGTAAACGCTTGACGGCCATGGGAGGAGAAAGCCCCAGATCATCTGTTA  
CCCAGAGACAGGGCACTATATTGAGCCTCCTTACTTCCCCCTGTGTCGGGCTTCCCTGCATGCCTTGGTGGGCAG  
TCCTATTATCTGGGGAGGGGAGCCAGGGCTCATGTATGGCTCAGGTGGATGCTTGAAACAACCTCCAGACTTT  
CTTCCACAAACACTTGGGTGGCCACGAGGGGACAATCCCATCAAAAGTGTAAATTTTATTTGATCATGTGGCCTC  
TCTGTTGCTAATCTCTCCTGGAACATCTGCCACATTTAGTGTGTGTATGTGTATTCTTTTGTTTTAAATA  
ACTAAAGTTTTTCCCCTCATTATTAAAATGAATTTACCAGTAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4047**

MSNKLLSPHPHSVLRSEFKMASSPAVLRASRLYQWSLKSSAQFLGSPQLRQVGQIIRVPARMAATLIILEPAGRC  
CWDEPVRIAVRGLAPEQPVTLRASLRDEKGALFQAHARYRADTLGELDLERAPALGGSFAGLEPMGLLWALEPEK  
PLVRLVKRDVRTIPLAVELEVLDGHDPPDGRLLCQTRHERYFLPPGVRREPVRVGRVGRGTFLFPPEPGFFPGIVDM  
FGTGGGLLEYRASLLAGKGFVMAALAYNYEDLPKTMETLHLEYFEEAMNYLLSHPEVKGPVGVLGISKGGELC  
LSMASFLKGITAAVVINGSVANVGGLTRYKGETLPPVGVNRRRIKVTGDYADIVDLNSPLEGPDQKSFIPIVER  
AESTFLFLVGQDDHNWKSEFYANEACKRLQAHGRRKPQIICYPETGHYIEPPYFPLCRASLHALVGSPFIWGGEP  
RAHVMAQVDAWKQLQTFFHKHLGGHEGTIPSKV



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**FIGURE 4048**

GGCACGAGGACAGGTGCGCTGACTGGGCTCCTCCCCGGGCCCCGCCCCGACAGGTTTGTCTTGTGACCGCGGGCGG  
CCGCTGCTTCTTTCCCGAGCTTGGAACCTTCGTTATCCGCGATGCGTTTCCTGGCAGCTACATTCTGCTCCTGGC  
GCTCAGCACCGCTGCCCAGGCCGAACCGGTGCAGTTCAAGGACTGCGGTTCTGTGGATGGAGTTATAAAGGAAGT  
GAATGTGAGCCCATGCCCCACCCAAACCCTGCCAGCTGAGCAAAGGACAGTCTTACAGCGTCAATGTCACCTTCAC  
CAGCAATATTCAGTCTAAAAGCAGCAAGGCCGTGGTGATGGCATCCTGATGGGCGTCCCAGTTCCCTTTCCCAT  
TCCTGAGCCTGATGGTTGTAAGAGTGGAATTAAGTCCCTATCCAAAAAGACAAGACCTATAGCTACCTGAATAA  
ACTACCAGTGAAAAGCGAATATCCCTCTATAAACTGGTGGTGGAGTGGCAACTTCAGGATGACAAAACCAAAG  
TCTCTTCTGCTGGGAAATCCCAGTACAGATCGTTTCTCATCTCTTAAGTGCCTCATTGAGTTCGGTGCATCTGGCC  
AATGAGTCTGCTGAGACTCTTGACAGCACCTCCAGCTCTGCTGCTTCAACAACAGTGACTTGCTCTCCAATGGTA  
TCCAGTGATTTCGTTGAAGAGGAGGTGCTCTGTAGCAGAACTGAGCTCCGGGTGGCTGGTTCTCAGTGGTTGTCT  
CATGTCTCTTTTCTGTCTTAGGTGGTTTCATTAAATGCAGCACTTGGTTAGCAGATGTTAATTTTTTTTTTAA  
CAACATTAACCTTGTGGCCTCTTTCTACACCTGGAAATTTACTCTTGAATAAATAAAAACTCGTTTGTCTTGTCAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4049**

MRFLAATFLLLALSTAAQAEPVQFKDCGSVDGVIKEVNVSPCPTQPCQLSKGQSYSVNVTFTSNIQSKSSKAVVH  
GILMGVPVPFPIPEPDGCKSGINCPIQKDKTYSYLNKLPVKSEYPSIKLVVEWQLQDDKNQSLFCWEIPVQIVSH  
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**FIGURE 4050A**

GCTACACCTCCTCCAGGAATACCTCCCCCTGGAGTTCCACAAGGGATACCTCCTCAGTTAACAGCAGCCCCAGTT  
CCACCAGCCTCCAGTTCACAGAGCTCGCAAGTTCCAGAGAAACCTAGACCAGCACTGCTTCCTACTCCTGTGTCT  
TTTGGTTCTGCCCCACCGACAACCTTACCATCCTCCGTTGCAATCAGCTGGTCCATCAGAACAAGTGAATTCAAAA  
GCTCCTTTGAGCAAGTCTGCTCTGCCATACAGTTTATTCTCATCTGATCAAGGACTTGGGGAGTCTTCAGCTGCT  
CCATCTCAGCCAATCACTGCAGTGAAGGACATGCCAGTGAGATCAGGTGGCTGCTTCCAGATCCTCCTAGAAGT  
AGTTACTTGGAAAGTCCAAGAGGCCCAAGATTTGATGGTCTCGAAGATTTGAGGATTTAGGGTCAAGGTGTGAA  
GGACCGAGACCCAAAGGGCCTCGTTTTGAAGGAAATCGCCCCGATGGGCCAAGACCCAGATATGAAGGTCACCCA  
GCAGAGGGCACTAAAAGCAAGTGGGGAATGATTCCCCGGGGGCCAGCATCTCAATTTTATATTACCCCCAGTACA  
TCCCTAAGTCCTCGACAGAGTGGACCACAGTGGAAAGGCCCAAAACCAGCTTTTGGACAGCAGCATCAGCAGCAA  
CCTAAGTCACAAGCAGAACCTCTTTTCAAGGAAACAAAGAACCATTAGCAGACACCAGTAGTAACCAGCAGAAGAAT  
TTTAAATGCAATCAGCTGCATTTTCCATTGCTGCAGATGTAAAGGATGTCAAGGCGGCTCAGTCAAATGAGAAT  
CTAAGCGACTCTCAACAAGAGCCACCTAAAAGTGAAGTCTCGGAAGGGCCCGTAGAGCCCTCTAATTGGGACCAG  
AATGTTCAAAGTATGGAGACTCAAATCGACAAAGCCCAAGCTGTACTCAGCCTGTACCCCTTGCGAATAAGCCT  
GTACCTGCTCAATCTACTTTTCTTCAAAAACAGGGGGGATGGAGGGAGGAACAGCAGTAGCAACATCATCATT  
ACAGCAGATAATGATTTTAAACCTGTGGGTATTGGTCTACCCCATTCAGAAAACAACCAAGATAAAGGCCTGCCT  
CGGCCAGATAATAGAGATAATAGATTAGAAGGCAATAGAGGCAACAGCTCATCTTACAGAGGTCTTGGGCAAAGC  
AGAATGGAAGACACACGGGATAAAGGTCTAGTAAACAGAGGTGCGCGCCAGGCAATCAGTCGAGGCCCAGGATTG  
GTCAAGCAAGAAGACTTTCCGGATAAGATGATGGGTAGAAGAGAAGATAGTCGAGAGAAGATGAACAGAGGAGAA  
GGTAGCCGGGACAGAGGGTTGGTGAGGCCTGGAAGCAGTCGGGAGAAAGTGCCAGGTGGTCTTCAAGGGAGCCAG  
GACAGGGGTGCAGCTGGCAGCCGAGAAAGGGGACCACCTCGGAGGGCTGGCAGTCAGGAGAGGGGACCTCTTCGA  
AGGGCTGGGAGTAGAGAGAGAATACCACCCGAAGAGCTGGGAGCAGGGAGAGAGGACCACCTCGAGGGCCTGGC  
AGTCGAGAAAGGGGACTGGGAAGATCAGATTTTGGTCTGATAGAGGTCCATTTCAGACCAGAACCCAGGAGATGGT  
GGGGAAAAATGTATCCATATCACCAGGATGAGCCTCCTAGGGCTCCATGGAACCATGGAGAAGAGCGAGGGCAT  
GAAGAGTTTCCATTAGATGGTAGAAATGCTCCAATGGAACGAGAAAGACTCGATGACTGGGATAGAGAGAGATAC  
TGGAGAGAATGTGAACGTGACTATCAAGATGATACACTAGAGCTCTATAACAGAGAGGACAGGTTCTCAGCACCA  
CCATCTCGGTCTCATGATGGAGATAGGCGAGGCCCTTGGTGGGATGATTGGGAGAGAGACCAGGATATGGATGAG  
GACTACAATAGGGAAATGGAAGGGACATGGACAGGGATGTGGATCGGATTTCAAGACCTATGGATATGTATGAT  
AGAAGTTTGGATAATGAGTGGGACAGAGATTATGGGAGACCACTGGATGAACAAGAATCACAGTTTCGTGAACGG  
GATATCCATCTCTTCCACCTTTACCGCCCTCCCACCTCTTCCACCTTTGGATAGATATCGGGATGATAGATGG  
AGAGAAGAAAGAAATCGAGAGCATGGGTATGATCGAGATTTCCGTGATAGGGGTGAGTTGAGGATTCGAGAGTAT  
CCAGAAAGAGGAGATACATGGCGGGAAGCGAGATTATGTTCTGACAGAAATGGACTGGGAAAGAGAACGGTTG  
TCAGACAGATGGTACCATCTGATGTGGATAGACATTTCCCCATGGCGGAACATATGCCCTCCTCACATCATTCC  
TCAGAAATGATGGGGTCCGATGCAAGCTTAGACTCTGACCAAGGCCTTGAGGGGTAAATGGTTCTCAGTCAGAGG  
CAGCATGAAATCATTGTGAAGCTGCACAAGAACTGAAAATGCTTCGGGAACAGAAAGAACAGCTTCAAAAGATG  
AAAGACTTCGGGTCTGAGCCACAGATGGCTGACCATCTACCACCTCAGGAATCAAGATTGCAGAATACATCTTCA  
AGACCTGGAATGTATCCGCCTCCAGGGTCGTATAGACTCCCCCTCCTATGGGCAAACCACCAGGTTCAATTGTA  
AGACCTCTGCTCCACCAGCAAGATCATCTGTTTCTGTGACCAAGCCACCTGTCCCAATACCACCACCTCCACCT  
CCTCCACCTCTACCTCCTCCTCCTCCAGTGATAAAGCCACAACTTCAGCTGTAGAACAGGAACGATGGGATGAA  
GATTCTTTCTATGGGCTCTGGGATACAAATGATGAACAAGGACTGAATTCAGAATTTAAGTCAGAAACTGCAGCA  
ATTCCATCTGCTCCAGTATTACCACCCACCTGTTCACTCTTCCATTCCCCCTCCTGGCCAGTGCCCTATGGGT  
ATGCCACCAATGTCCAAGCCACCACAGTACAACAGACTGTTGATTATGGCCATGGCCGAGATATATCCACTAAT  
AAAGTTGAACAGATACCTTATGGAGAAAGAATAACTCTACGCCAGATCCACTACCTGAAAGATCAACTTTTGAG  
ACAGAGCATGCAGGCCAACGTGATCGTTATGATAGAGAAAGAGATCGTGAGCCTTATTTTGATCGTCAAAGTAAT  
GTCATAGCAGATCATCGAGATTTTAAAGGGATCGTGAGACACATAGAGATCGAGACCGGGATCGTGGTGTATT  
GACTATGACCGGGATCGATTTGACAGAGAACGCCGACCCGAGATGATAGAGCTCAGTCATATCGAGACAAAAAA  
GACCATTCTCATCCAGAAGAGGGGGTTTTGATAGGCCATCCTATGACCGGAAGTCTGACCGACCAGTCTATGAA  
GGACCATCCATGTTTGGAGGAGAACGAAGGACTTATCCTGAGGAGCGAATGCCTCTGCCAGCTCCTTCACTGAGC  
CACCAGCCTCCTCCAGCTCCACGAGTCGAGAAGAAGCCTGAATCAAAGAATGTGGACGATATTTTGAACCACCG

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**FIGURE 4050B**

GGCCGGGAGAGCAGACCTGAGAGAATTGTTGTTATAATGAGAGGATTACCTGGCAGTGGAAGACACATGTTGCA  
AAACTTATTCGAGATAAGGAGGTAGAAATTTGGAGGACCTGCACCCAGAGTTCTAAGCCTGGATGATTACTTCATC  
ACTGAAGTGGAAAAAGAAGAAAAAGATCCAGATTCTGGAAAGAAAGTGAAAAAGAAGGTAATGGAATATGAATAT  
GAAGCTGAGATGGAGGAGACTTACCGCACCAGCATGTTCAAACTTTCAAAAAGACTCTGGATGATGGCTTTTTT  
CCCTTCATCATCCTGGATGCCATCAATGACAGAGTTAGGCATTTTGACCAGTTTTGGAGTGCAGCAAAAACCAAG  
GGATTTGAGGTATATTTGGCTGAAATGAGTGCAGATAACCAGACTTGTGGCAAGAGAAATATTCATGGAAGAAAG  
CTTAAAGAAATAAATAAGATGGCTGATCACTGGGAACTGCACCTCGTCACATGATGCGTCTAGATATTCGTTCT  
TTGCTGCAAGATGCTGCTATTGAAGAGGTAGAGATGGAAGATTTTGATGCAAATATCGAAGAACAGAAAGAAGAA  
AAGAAAGATGCAGAGGAAGAGGAAAGCGAACTGGTAGGAGACAGACCAACCACTTTGAACAGTGTCTCTTTATTA  
AAATTCCTAAAGAAGGTTTAAATTCAGATCTGTGGTTAGACAACCTACTGTTGATATACACTTTAGTGGTAAAGT  
TTCCATAATCATCTTCAAGGAGACTTTTGGTACTCTTTATTTTTCCCCAGACCAAAAGAACCCTCTAATGTGGT  
GTTAAGAGAAAGTTTTAAACAGAGTGCTAAGAACTTACCCTTGTAATCATCTATTTGTGGGTGGTTTTAGGGGAG  
TATACCTTTTAAAGAAATCAATTACATATGAAAGGGCATTCTTACATTCCAGCAGATATGTGGCACAGCCTACCC  
AACATATGCATAATTGTCTCTTCTTTGCTACAAGATCTCCAAATTTGAGTTTCTGTCAACAGAGGCAGAAGAACT  
TATTGAATGGGGAGGCAGAGGGTTGCCACTGGCTGCTAGATTGTTCTTCTGCATTTTATCCTAAGTGACGGGGA  
AAAATTAAATGACTGTGTAGGCAATGGATTTTGCTCAGGCTGATTAGAGGCTTACATAGTGTGAGTTAAAGTTT  
CTGTGTACCTAATGTAAATGCTTTTCGATCACACCTCTGTAGAGATGTTTGCCTTTCCCTGTCAATCAAGAATAT  
GCGACCTATAGAGTTACGTTGACTTTTCAGTGTTTACTGAAGTACAGAGATTAGCAATGCCTTGGAATAGTGTG  
CTTTTTAAATCCAGAATATTACTCGGTTTATTTAATACTTGAGCCCTTGCTAAAGTTGCTCCTCATATTCTTTTG  
AAAATGTACAAAATGAGAACTCTGATTCCTACCCCTAGAGTATACAGAATCTCCAGGGAGTGGTCCCATCGAAC  
CCGTGTGTGATATAGAGGACTCTTGATAAAAACCTGTGTTTATATAAAGATGGTGTCAACCTCTACATTCCAAGAT  
TTCAAATGTGGATTAAAAATAAGTTTTAAAGT

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**FIGURE 4051**

MPVRSGLLPDPPRSSYLESPRGPRFDGPRRFEDLGSRCGPRPKGPRFEGNRPDGPRPRYEGHPAEGTKSKWGM  
IPRGPASQFYITPSTLSLSPRQSGPQWKGPAPAFGQQHQQPKSQAEP LSGNKEPLADTSSNQKNFKMQSAAFSI  
AADVKDVKAAQSNENLSDSQEPPKSEVSEGPVEPSNWDQNVQSMETQIDKAQAVTQPVP LANKPVPAQSTFP SK  
TGGMEGGTAVATSSLTADNDFKPVGIGLPHSENNQDKGLPRPDNRDNRLEGNRGNSSSYRGPQSRMEDTRDKGL  
VNRGRGQAISRGPGLVKQEDFRDKMMGRREDSREKMNREGGSRDRGLVRPGSSREKVP GGLQGSQDRGAAGSRER  
GPPRRAGSQERGPLRRAGSRERIPRRAGSRERGPGRGSRERGLGRSDFGRDRGPFRPEPGDGGEKMPYHRD  
EPPRAPWNHGEERGHEEFLDGRNAPMERERLDDWDRERYWRECERDYQDDTLELYNREDRFSAPP SRSHDGDRR  
GPWWDDWERDQDMEEDYNREMERDMDRDVDRI SRPMDMYDRSLDNEWDRDYGRPLDEQESQFRERDIPSLPPLPP  
LPPLPPLDRYRDDRWREERNREHGYDRDFRDRGELRIREYPERGDTWREKRDYVPDRMDWERERLSDRWYPSD VD  
RHSPMAEHMPSSSHSSEMMGSDASLSDQGLGGVMVLSQRQHEI ILKAAQELKMLREQKEQLQKMKDFGSEPQMA  
DHLPPQESRLQNTSSRPGMYPPPGSYRPPPMGKPPGSIVRPSAPPARSSVPVTRPPVPIPPPPPPPLPPPPPV  
IKPQTSAVEQERWDEDSFYGLWDTNDEQGLNSEFKSETAAIP SAPVLPPPPVHSSIPPPGPVPMGMPPMSKPPPV  
QQTVDYGHGRDISTNKVEQIPYGERITLRPDPLPERSTFETEHAGQRDRYDRERDREPYFDRQSNVIADHRDFKR  
DRETHRDRDRDRGVIDYDRDRFDRERPRDDRAQSYRDKKDHSSSRGGFDRPSYDRKSDRPVYEGPSMFGGERR  
TYPEERMPLPAPSLSHQPPAPRVEKKPESKNVDDILKPPGRESRPERIVVIMRGLPGSGKTHVAKLIRDKEVEF  
GGPAPRVLSDDYFITEVEKEEKDPDSGKKVKKVMEYEEYAEEMEETYRTSMFKTFKKTLDGFFPFIILDAIND  
RVRHFDQFWSAAKTGFEVYLAEMSADNQTGKRNHGRKLKEINKMADHWETAPRHMMRLDIRSLQLQDAAIEEV  
EMEDFDANIEEQKEKKDAEEEESELGYIPKSKWEMDTSEAKLDKLDGLRTGTRKRDWEAIASRMEDYLQLPDD  
YDTRASEPGKKRVRWADLEKKDADRKRAIGFVVGQTDWEKITDESGLAEKALNRTKYI

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**FIGURE 4052**

GGCACGAGGCTGCTGTCTGCGGAGGAACTGCATCGACGGACGGCCGCCAGCTACGGGAGGACCTGGAGTGGCA  
CTGGGCGCCCCACGGACCATCCCCGGGACCCGCTGCCCCCTCGGCGCCCCGCCCGGGCCGCTCCCCGTCGG  
GTTCCCCAGCCACAGCCTTACCTACGGGCTCCTGACTCCGCAAGGCTTCCAGAAGATGCTCGAACCACCGGCCGG  
GGCCTCGGGGCAGCAGTGAGGGAGGCGTCCAGCCCCCACTCAGCTCTTCTCCTCCTGTGCCAGGGGCTCCCCGG  
GGGATGAGCATGGTGGTTTTCCCTCGGAGCCCCCTGGCTCGGGACGTCTGAGAAGATGCCGGTCATGAGGCTGTT  
CCCTTGCTTCTGTCAGCTCCTGGCCGGGCTGGCGCTGCCTGCTGTGCCCCCCCAGCAGTGGGCCTTGTCTGCTGG  
GAACGGCTCGTCAGAGGTGGAAGTGGTACCCCTCCAGGAAGTGTGGGGCCGCAGCTACTGCCGGGCGCTGGAGAG  
GCTGGTGGAGTCGTGTCCGAGTACCCACAGCGAGGTGGAGCACATGTTAGCCCCATCCTGTGTCTCCCTGCTGCG  
CTGCACCGGCTGCTGCGGCGATGAGAATCTGCACTGTGTGCCGTGGAGACGGCCAAATGTCACCATGCAGCTCCT  
AAAGATCCGTTCTGGGGACCGCCCTCCTACGTGGAGCTGACGTTCTCTCAGCACGTTGCTGCGAATGCCGGCC  
TCTGCGGGAGAAGATGAAGCCGGAAGGAGGAGACCCAAGGGCAGGGGGAAGAGGAGGAGAGAGAAGCAGAGACC  
CACAGACTGCCACCTGTGCGGCGATGCTGTTCCCGGAGGTAAACCCACCCCTTGGAGGAGAGAGACCCCGCACCC  
GGCTCGTGTATTTATTACCGTCACACTCTTCAGTGACTCCTGCTGGTACCTGCCCTCTATTTATTAGCCAACCTGT  
TTCCCTGCTGAATGCCTCGCTCCCTTCAAGACGAGGGGCAGGGAAGGACAGGACCCTCAGGAATTCAGTGCCTTC  
AACAACGTGAGAGAAAGAGAGAAGCCAGCCACAGACCCCTGGGAGCTTCCGCTTTGAAAGAAGCAAGACACGTGG  
CCTCGTGAGGGGCAAGCTAGGCCCCAGAGGCCCTGGAGGTCTCCAGGGGCTGCAGAAGGAAAGAAGGGGGCCCT  
GCTACCTGTTCTTGGGCCTCAGGCTCTGCACAGTCAAGCAGCCCTTGCTTTCCGAGCTCCTGTCCAAAGTAGGG  
ATGCGGATCCTGCTGGGGCCGCCACGGCCTGGCTGGTGGGAAGGCCGGCAGCGGGCGGAGGGGATCCAGCCACTT  
CCCCCTCTTCTTGAAGATCAGAACATTAGCTCTGGAGAACAGTGGTTGCCTGGGGGCTTTTGCCACTCCTTG  
TCCCCCGTGATCTCCCTCACACTTTGCCATTTGCTTGTACTGGGACATTGTTCTTTCCGGCCAAGGTGCCACCA  
CCCTGCCCCCCTAAGAGACACATACAGAGTGGGCCCCGGGCTGGAGAAAGAGCTGCCTGGATGAGAAACAGCTC  
AGCCAGTGGGGATGAGGTACCCAGGGGAGGAGCCTGTGCGTCCCAGCTGAAGGCAGTGGCAGGGGAGCAGGTTCC  
CCAAGGGCCCTGGCACCCCCACAAGCTGTCCCTGCAGGGCCATCTGACTGCCAAGCCAGATTCTTTGAATAAAG  
TATTCTAGTGTGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4053**

MPVMRLFPCFLQLLAGLALPAVPPQQWALSAGNGSSEVEVVFQEVWGRSYCRALERLVDVVSEYPSEVEHMFSP  
SCVSLLRCTGCCGDENLHCVPVETANVTMQLLKIRSGDRPSYVELTFSQHVRCECRPLREKMKPERRRPKGRGKR  
RREKQRPTDCHLCGDAVPRR

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**FIGURE 4054**

GATAGACCACCATCATGAACGACACAGTAACTATCCACACTAGAAAGTTCATGATCAACCGACGACTTCAGAGGA  
AACAAACAGTCATTGATATCCTTCACCCTGGGAAGGCAACAGTGCCTAAGACAGAAATTTGGGAAAACTAGCCA  
AAATGTACAAGACCACACTGGATGTCATCTTTGTATTTGCATTCAAACTCATTTTGGTGGTGGCAAGACAACCG  
GCTTTGGCATGATTTATGATCCCCTGGATTATGCAAAGAAAAATGAACCCAAACATAGACTTGCAAGACATGGCC  
TGTATGAGAAGAAAAAGACCTCAAGAAAGCAATGAGAGGAACGCAAGAACAGAAATGAGGAAAGTCAGGGGGACTG  
CAAAGGCCAATGTTGGTGTGGCAAAAAGCTGAAGGAGTAAAGGTGCTGCAATGGTGTAACTGTGGCCATTGTG  
GATTTTTCACAAGAATATTAATAAACTAAACACTTCAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 4055**

AAAAGCAAGCCAGGAGGTGCTTGC GGCCGCTTCTAGTAGTTTCCAGGCGCTGCCGGGCGGCTGGCACTAAGCGGT  
CCTGAGGCTGTGGCTACGGCTGCTCCGGAGCTGGTGGCGCCGCGATAGGAGAGCCGATGGCCAAGTGGGGTGAGG  
GAGACCCACGCTGGATCGTGGAGGAGCGGGCGGACGCCACCAACGTCAACAACCTGGCACTGGACGGAGAGAGATG  
CTTCAAATTGGTCCACGGATAAGCTGAAAACACTGTTCTTGGCAGTGCAGGTTCAAATGAAGAAGGCAAGTGTG  
AGGTGACGGAAGTGAGTAAGCTTGATGGAGAGGCATCCATTACAATCGCAAAGGGAACTTATCTTCTTTTATG  
AATGGAGCGTCAAACCTAACTGGACAGGTACTTCTAAGTCAGGAGTACAGTACAAAGGACATGTGGAGATCCCCA  
ATTTGTCTGATGAAAACAGCGTGGATGAAGTGGAGATTAGTGTGAGCCTTGCCAAAGATGAGCCTGACACAAATC  
TCGTGGCCTTAATGAAGGAAGAAGGGGTGAAACTTCTAAGAGAAGCAATGGGAATTTACATCAGCACCCCTCAAAA  
CAGAGTTACCCAGGGCATGATCTTACCTACAATGAATGGAGAGTCAGTAGACCCAGTGGGGCAGCCAGCACTGA  
AAACTGAGGAGCGCAAGGCTAAGCCTGCTCCTTCAAAAACCCAGGCCAGACCTGTTGGAGTCAAAATCCCCACTT  
GTAAGATCACTCTTAAGGAAACCTTCCTGACGTCACCAGAGGAGCTCTATAGAGTGTTTACCACCCAAGAGCTGG  
TGCAGGCCTTTACCCATGCTCCTGCAACATTAGAAGCAGACAGAGGTGGAAAGTTCCACATGGTAGATGGCAACG  
TCTCTGGGGAATTTACTGATCTGGTCCCTGAGAAACATATTGTGATGAAGTGGAGGTTTAAATCTTGGCCAGAGG  
GACACTTTGCCACCATCACCTTGACCTTCATCGACAAGAACGGAGAGACTGAGCTGTGCATGGAAGGTCGAGGCA  
TCCCTGCTCCTGAGGAAGAGCGGACACGACAGGGCTGGCAGCGGTACTACTTTGAGGGCATTAAACAGACCTTTG  
GCTATGGCGCACGCTTATTTTAGGGCCAGCGGCAGGGGACTCCAGCCTGCTGGACACTTCAGTCCAGCTCTCTCC  
TGACTGGGGCTTGCGACTCACAGGATTGCATCGTCCCAGCTGCTAACTTGGGGCCGGGGCCCCCTCCCTTCCACAT  
ATACCTTGGGTTTGTGCATGTTTTCTGCTGGGTGGGTTTCAGAGGGCAATTTCTCTTTTATGTGTACATATGCTAA  
ATAAACATAATTTAAAAAACAAAAA

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**FIGURE 4056**

MAKWGEGDPRWIVEERADATNVNNWHWTERDASNWSTDKLKTLFLAVQVQNEEGKCEVTEVSKLDGEASINNRKG  
KLIFYEWSVKLNWTGTSKSGVQYKGVHVEIPNLSDENSVDVEIISVSLAKDEPDNLVALMKEEGVKLLREAMGI  
YISTLKTEFTQGMILPTMNGESVDPVGQPALKTEERKAKPAPSKTQARPVGVKIPTCKITLKETFLTSPPELYRV  
FTTQELVQAFTHAPATLEADRGKGFHMVDGNVSGFTDLVPEKHIVMKWRFKSWPEGHFATITLTFIDKNGETEL  
CMEGRGIPAPEEERTRQGWQRYFFEGIKQTFGYGARLF

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**FIGURE 4057**

GTAGGAGTCCGCGGCAGCCTCCGGGTAAGCCAAGCGCCGCGCAGTGCTGAGTTCCCGCACGCCGCAGAGCCATGG  
AGATCGGCACCGAGATCAGCCGCAAGATCCGGAGTGCCATTAAGGGGAAATTACAAGAATTAGGAGCTTATGTTG  
ATGAAGAACTTCCTGATTACATTATGGTGATGGTGGCCAAACAAGAAAAGTCAGGACCAAATGACAGAGGATCTGT  
CCCTGTTTCTAGGGAACAACAATTTCGATTCACCGTATGGCTTCATGGTGTATTAGATAAACTTCGCTCTGTTA  
CAACTGAACCCTCTAGTCTGAAGTCTTCTGATACCAACATCTTTGATAGTAACGTGCCTTCAAACAAGAGCAATT  
TCAGTCGGGGAGATGAGAGGAGGCATGAAGCTGCAGTGCCACCACTTGCCATTCTAGCGCGAGACCTGAAAAAA  
GAGATTCCAGAGTTTCTACAAGTTCGCAGGAGTCAAAAACCAAAATGTCAGACAGACTTACGATGATGGAGCTG  
CAACCCGACTAATGTCAACAGTGAACCTTTGAGGGAGCCAGCACCTCTGAAGATGTGATTGATATTAAGCCAG  
AACCAGATGATCTCATTGACGAAGACCTCAACTTTGTGCAGGAGAATCCCTTATCTCAGAAAAAACCTACAGTG  
ACACTTACATATGGTTCTTCTCGCCCTTCTATTGAAATTTATCGACCACCTGCAAGTAGAAATGCAGATAGTGGT  
GTTCAATTTAAACAGGTTGCAATTTCAACAGCAGCAGAATAGTATTATGCTGCCAAGCAGCTTGATATGCAGAGT  
AGTTGGGTATATGAAACAGGACGTTTGTGTGAACCAGAGGTGCTTAACAGCTTAGAAGAAACGTATAGTCCGTTT  
TTAGAAACAACTCGGAGAAAATGAGTATGGAGGATGAAAACCTTTCGGAAGAGAAAGTTGCCTGTGGTAAGTTCA  
GTTGTTAAAGTAAAAAAATTCAATCATGATGGAGAAGAGGAGGAAGAAGATGATGATTACGGGTCTCGAACAGGA  
AGCATCTCCAGCAGTGTGTCTGTGCCTGCAAAGCCTGAAAGGAGACCTTCTCTCCACCTTCTAAACAAGCTAAC  
AAGAATCTGATTTTGAAGGCTATATCTGAAGCTCAAGAATCCGTAACAAAAACAATACTACTCTACAGTTCCA  
CAGAAACAGACACTTCCAGTTGCTCCCGAACTCGAACTTCTCAAGAAGAATTGCTAGCAGAAGTGGTCCAGGGA  
CAAAGTAGGACCCCCAGAATAAGTCCCCCATTAAAGAAGAGGAAACAAAAGGAGATTCTGTAGAAAAAAATCAA  
GCTGAGATGAGTGAAGTGAAGTGTGGCACAGAAACCAGAAAACTTTTGGAGCGCTGCAAGTACTGGCCTGCTTGT  
AAAAATGGGGATGAGTGTGCCTACCATCACCCATCTCACCTGCAAAGCCTTCCCCAATTGTAAATTTGCTGAA  
AAATGTTTGTGTTTCACCCAAATTGTAAATATGATGCAAAGTGTACTAAACCAGATTGTCCCTTCACTCATGTG  
AGTAGAAGAATTCCAGTACTGTCTCCAAAACAGTTGCACCACCAGCACCACCTTCCAGTAGTCAGCTCTGCCGT  
TACTTCCCTGCTTGTAAAGAAGATGGAATGTCCCTTCTATCATCCAAACATTGTAGGTTTAACTCAATGTACA  
AGACCGGACTGCACATTCTACCATCCCACTTAATGTCCCACCACGACATGCCTTGAAATGGATTTCGACCTCAA  
ACCAGCGAATAGCACCCAGTCCCTGCCTGGCAGAAGATCATGCAGTTTGGAAGTTTTCATGTACTGATGAAAGATA  
CTCTACAGAACTTGTCAAATCTTTGAACTTGGAATATATTGCTTTTATAATATGAAGTTTATTGCCTATCT

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**FIGURE 4058**

MISLTKTSTLCRRIPYLRKKPTVILTYGSSRPSIEIYRPPASRNADSGVHLNRLQFQQQNSIHAAKQLDMQSSW  
VYETGRLCEPEVLNSLEETYSPPFRNNSEKMSMEDENFRKRKLPVVSSVVKVKKFNHDGEEEEEDDDYGSRTGSI  
SSSVSVPAKPERRPSLPPSKQANKNLILKAISEAQESVTKTTNYSTVPQKQTLVPVAPRTRTSQEELLAEVVQGQS  
RTPRISPPIKEEETKGDSVEKNAEMSELSVAQKPEKLLERCKYWPACNGDECAYHHPISPCKAFPNCCKFAEKC  
LFVHPNCKYDAKCTKPDPCPTHVSRRIPVLSPKPVAPPAPPSSSQLCRYFPACKKMECPFYHPKHCRFNTQCTRP  
DCTFYHPTINVPPRHALKWIRPQTSE

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**FIGURE 4059**

AATTCGGCGGAAGTGGTGGAGGAACTTCCGGCAGCGGCAGCTCAAGTGGCCAAGGCAAGATGGGTCAAAGTCAG  
AGTGGTGGTCATGGTCCTGGAGGTGGCAAGAAGGATGACGAGGACAAGAAAAAGAAATATGAACCTCCTGTACCA  
ACTAGAGTGGGGAAAAAGAAGAAGAAAACAAAGGGACCAGATGCTGCCAGCAAAGTGGCACTGGTGACACCTCAC  
ACTCAGTGCCGGTTAAAATTACTGAAGTTAGAGAGAAATTAAAGACTATCTTCTCATGGAGGAAGAATTCATTAGA  
AATCAGGAACAAATGAAACCATTAGAAGAAAAGCAAGAGGAGGAAAGATCAAAAGTGGATGATCTGAGGGGGACC  
CCGATGTCAGTAGGAACCTTGAAGAGATTATTGATGACAATCATGCCATCGTGTCTACATCTGTGGGCTCAGAA  
CACTACGTCAGCATTCTTTTCAATTTGTAGACAAGGATCTGCTGGAACCTGGCTGCTCGGTCTGCTCAACCACAAG  
GTGCATGCCGTGATAGGGGTGCTGATGGATGACACGGATCCCCTGGTCACAGTGATGAAGGTAGAAAAGGCCCCC  
CAGGAGACCTATGCAGATATTGGGGGGTTGGACAACCAAATTCAGGAAATTAAGGAATCTGTGGAGCTTCCTCTC  
ACCCATCCTGAATATTATGAAGAGATGGGTATAAAGCCTCCTAAGGGGGTCATTCTCTATGGTCCACCTGGCACA  
GGTAAAACCTTGTTAGCCAAAGCAGTAGCAAACCAAACCTCAGCCACTTTCTTGAGAGTGGTTGGCTCTGAACCTT  
ATTGAGAAGTACCTAGGTGATGGGCCCCAACTCGTACGGGAATTGTTCCGAGTTGCTGAAGAACATGCACCGTCC  
ATCGTGTATTATTGATGAAATTGACGCCATTGGGACAAAAAGATATGACTCCAATTCTGGTGGTGAGAGAGAAATT  
CAGCGAACAATGTTGGAAGTCTGAACCAAGTTGGATGGATTTGATTCTAGGGGAGATGTGAAAGTTATCATGGCC  
ACAAACCGAATAGAACTTTGGATCCAGCACTTATCAGACCAGGCCGATTGACAGGAAGATTGAGTTCCCCCTG  
CCTGATGAAAAGACGAAGAAGCGCATCTTTAGATTACACAAGCAGGATGACGCTGGCTGATGATGTAACCTG  
GACGACCTGATCATGGCTAAAGATGACCTCTCTGGTGTGACATCAAGGCAATCTGTACAGAAGCTGGTCTGATG  
GCCTTAAGAGAACGTAGAATGAAAGTAACAAATGAAGACTTCAAAAAATCTAAAGAAAATGTTCTTTATAAGAAA  
CAGGAAGGCACCCCTGAGGGGCTGTATCTCTAATGAACCATGGCTGTATCAGGAAAATGGTTGGGAGATTTCTC  
AATCCCTGAAAGGGATGAGGTTGGGGGAGTTGCCCAGAGGAATCCCTGTTCCCACTGATTTTTATTAGCAAAACA  
TCCTGTGTCTTTTGGAGTACGATGTGTAAGTGCCATTGGGTGGCCTGTTGGTCACTGTGCAGCAGTCTGCTTCC  
CAATAAAGCGTGCTCTTTCACAAG

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**FIGURE 4060**

MGQSQSGGHGPGGGKKDDEDKKKKYEPPVPTRVGKKKKKTKGPDAAASKLPLVTPHTQCRLKLLKLERIKDYLLME  
EEFIRNQEQMKPLEEKQEEERSKVDDLRGTPMSVGTLEEIIDDNHAIIVSTSVGSEHYVSILSFVDKDLLEPGCSV  
LLNHKVHAVIGVLMDDTDPLVTVMKVEKAPQETYADIGGLDNQIQEIKESVELPLTHPEYYEEMGIKPPKGVILY  
GPPGTGKTLAKAVANQTSATFLRVVGSELIQKYLGDGPKLVRELFRAEEHAPSIVFIDEIDAIGTKRYDSNSG  
GEREIQRMTLELLNQLDGFDVRGDKVIMATNRIETLDPALIRPGRIDRKIEFPLPDEKTKKRIFQIHTSRMTLA  
DDVTLDDLIMAKDDLSGADIKAICTEAGLMALRERRMKVTNEDFKKSKENVLYKKQEGTPEGGLYL

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**FIGURE 4061**

CCTTTCGGCCGGAACCGCCATGTTCCAGTAATTCGCCAAAATGACGAACACAAAGGGAAAGAGGAGAGGCACCCG  
ATATATGTTCTCTAGGCCTTTTAGAAAACATGGAGTTGTTCTTTGGCCACATATATGCGAATCTATAAGAAAGT  
TGATATTGTAGACGTCAAGGGAATGGGTACTGTTCAAAAAGGAATGCCCCACAAGTGTTACCATGGCAAAACTGG  
AAGAGTCTACAGTGTTACCCAGCATGCTGTGGCATTGTTGTAAACAAACAAGTTAAGGGCAAGATTCTTGCCAA  
GAGAATTAATGTGCGTATTAAGCACATTAAGCACTCTAAGAGCCAAGATAGCTTCCTGAAACGCGTGAAGGAAAA  
TGATCCTCCACCCAGAGAAGCACACTTTGTGAGAACCAGTGGGAAGGAGCCTGAGCTGCTGGAACCTATTCCCTG  
TGAATTCATGGCATAATAGGTGTT

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**FIGURE 4062**

MTNTKGKRRGTRYMF SRPFRKHGVVPLATYMRIYKKVDIVDKMGTVQKGMPhKCYHGKTGRVYSVTQHAVGIV  
VnkQVKgKILAKRINVRIKHikHskSQDSfLkRVKENDPPPREAHFVRTSGKEPELLEPIpCEfMA



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**FIGURE 4063**

AGTGGTGCTGGGAGTGTCGTGGACGCCGTGCCGTTACTCGTAGTCAGGCGGCGGCGCAGGCGGCGGCGGCGGCAT  
AGCGCACAGCGCGCCTTAGCAGCAGCAGCAGCAGCAGCAGCATCGGAGGTACCCCGCCGTGCGCAGCCCCGCGC  
TGGTGACGCCACCCCTCGCTCCCTCTGCTCTTCCCTCCCTTCGCTCGCACCATGGCTGATCAGCTGACCGAAGAACA  
GATTGCTGAATTCAAGGAAGCCTTCTCCCTATTTGATAAAGATGGCGATGGCACCATCACAAACAAGGAACITGG  
AACTGTCATGAGGTCACTGGGTCAGAACCCCAACAGAAGCTGAATTGCAGGATATGATCAATGAAGTGGATGCTGA  
TGGTAATGGCACCATTGACTTCCCCGAATTTTTGACTATGATGGCTAGAAAAATGAAAGATACAGATAGTGAAGA  
AGAAATCCGTGAGGCATTCCGAGTCTTTGACAAGGATGGCAATGGTTATATCAGTGCAGCAGAAGTACGTACGT  
CATGACAACTTAGGAGAAAACTAACAGATGAAGAAGTAGATGAAATGATCAGAGAAGCAGATATTGATGAGAGA  
CGGACAAGTCAACTATGAAGAATTCGTACAGATGATGACTGCAAAATTGAAGACCTACTTTCAACTCCTTTTTCCC  
CCCTCTAGAAGAATCAAATTGAATCTTTTACTTACCTCTTGCAAAAAAAGAAAAAAGAAAAAAGTTCAATTATT  
CATTCTGTTTTCTATATAGCAAACTGAATGTCAAAAGTACCTTCTGTCCACACACACAAAAATCTGCATGTATTGG  
TTGGTGGTCCCTGTCCCCTAAAGATCAAGCTACACATCAGTTTTACAATATAAATACTTGTACTACCTTAATGATA  
AGGACTCCTTAAAGTTCCATTTGCTAATGATTAATACACTGTTTGGGCTGGCCAGTTTTTCATGCATGCAGCTTG  
ACGATTGAGCACAGTCAGGCCTTTGTATTAAAAATGAAAAATGAAAAACAAATTCAAACCTATTCAAATGGGT  
TCTAGTTCAATTTGTTTAGTATAAATTGTCATAGCTGTTTACTGAAAACAAACACATTTAAAATTGGTTTACCT  
CAGGATGACGTGCAGAAAAATGGGTGAAGGATAAACCCTGAGACGTGGCCCCACTGGTAGGATGGTCTCTTGT  
ACTTCGTGTGCTCCGACCCATGGTGACGATGACACACCCTGGTGGCATGCCCGTGTATGTTGGTTTAGCGTTGTC  
TGCATTGTTCTAGAGTGAAACAGGTGTCAGGCTGTCACTGTTTACACAAAATTTTTAATAAGAAACATTTACCAAG  
GGAGCATCTTTGGACTCTCTGTTTTTAAACCTTCTGAACCATGACTTGGAGCCGGCAGAGTAGGCTGTGGCTGT  
GGACTTCAGCACAAACCATCAACATTGCTGTTCAAAGAAATTACAGTTTACGTCCATTCCAAGTTGTAAATGCTAG  
TCTTTTTTTTTTTTTTTTCCAATAAA

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**FIGURE 4064**

MADQLTEEQIAEFKEAFSLFDKDGDTITTKELGTVMRSLGQNPTEAELQDMINEVDADGNGTIDFPFELTMMAR  
KMKD TDSEEEIREAFRVFDKDGNGYISAAELRHVMTNLGEKLTDEEVDEMIREADIDGGQVNYEEFVQMMTAK

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**FIGURE 4065**

GCTGCCACCGCTCCTGCCACTGCAGTGTCTCGAGCCCCGTGCAGGGGAGCTTGCGGGAGGATCGACCGACAGACGG  
ACGCACGCCGAGGCACTGCGCCCCAGCCCCGCGCCGGTGCCACCGCAGCCCCGACCCCGGCCAGTCCAGCCG  
CCCCTCGCCCCGGTGCTAGGTGCCCGGCCCCACACCGCCAGCTGCTCGGCGCCCCGGGTCCGCCATGCGCTCCGCC  
GCTGTCTTGGCTCTTCTGCTCTGCGCCGGGCAAGTCACTGCGCTCCCTGTGAACAGCCCTATGAATAAAGGGGAT  
ACCGAGGTGATGAAATGCATCGTTGAGGTTCATCTCCGACACACTTTCCAAGCCCAGCCCCATGCCTGTCAGCCAG  
GAATGTTTTGAGACACTCCGAGGAGATGAACGGATCCTTTCCATTCTGAGACATCAGAATTTACTGAAGGAGCTC  
CAAGACCTCGCTCTCCAAGGCGCCAAGGAGAGGGGCACATCAGCAGAAGAAACACAGCGGTTTTGAAGATGAACTC  
TCAGAGGTTCTTGAGAACCAGAGCAGCCAGGCCGAGCTGAAAGAGGCGGTGGAAGAGCCATCATCCAAGGATGTT  
ATGGAGAAAAGAGAGGATTCCAAGGAGGCAGAGAAAAGTGGTGAAGCCACAGACGGAGCCAGGCCCCAGGCCCTC  
CCGGAGCCCATGCAGGAGTCCAAGGCTGAGGGGAACAATCAGGCCCTTGGGGAGGAAGAGGAGGAGGAGGAGGAG  
GCCACCAACACCCACCCCTCCAGCCAGCCTCCCCAGCCAGAAATACCCAGGCCACAGGCCGAGGGGGACAGTGAG  
GGCCTCTCTCAGGGTCTGGTGGACAGAGAGAAGGGCTGAGTGCAGAGCCAGGGTGGCAGGCAAAGAGAGAAGAG  
GAGGAGGAGGAGGAGGAGGAGGCTGAGGCTGGAGAGGAGGCTGTCCCCGAGGAAGAAGGCCCCACTGTAGTGCTG  
AACCCCAACCCGAGCCTTGGCTACAAGGAGATCCGGAAAGGCGAGAGTCGGTTCGGAGGCTCTGGCTGTGGATGGA  
GCTGGGAAGCCTGGGGCTGAGGAGGCTCAGGACCCCGAAGGGAAGGGAGAACAGGAGCACTCCAGCAGAAAAGAG  
GAGGAGGAGGAGATGGCAGTGGTCCCGCAAGGCCTCTTCCGGGGTGGGAAGAGCGGAGAGCTGGAGCAGGAGGAG  
GAGCGGCTCTCCAAGGAGTGGGAGGACTCCAAACGCTGGAGCAAGATGGACCAGCTGGCCAAGGAGCTGACGGCT  
GAGAAGCGGCTGGAGGGGCAGGAGGAGGAGGAGGACAACCGGGACAGTTCCATGAAGCTCTCCTTCCGGGCCCCGG  
GCCTACGGCTTCAGGGGCCCTGGGCCGACGTGCGACGAGGCTGGAGGCCATCCTCCCGGGAGGACAGCCTTGAG  
GCGGGCCTGCCCCCTCCAGGTCCGAGGCTACCCCGAGGAGAAGAAAGAGGAGGAGGGCAGCGCAAACCGCAGACCA  
GAGGACCAGGAGCTGGAGAGCCTGTGGCCATTGAAGCAGAGCTGGAGAAAGTGGCCCACAGCTGCAGGCACTA  
CGGCGGGGCTGAGACACCCGGCTGGCAGGGCTGGCCCCAGGGCACCCCTGTGGCCCTGGCTCTGCTGTCCCCTTGGC  
AGGTCTTGCCAGATGGCCCGACGCTGCTTCCGGTAGGGAGGCAGCCTCCAGCCTGCCCAAGCCCAGGCCACCC  
TATCGCCCCCTACGCGCCTTGTCTCCTACTCCTGACTCCTACCTGCCCTGGAACATCCTTTGCAGGGCAGCCCCA  
CAACTTTAAACATTGACGATTCCTTCTCTGAACACAGGCAGCTTTCTAGAAGTTCCCTTCTCCATCCTATCCA  
CTGGGCACAAC TGCAATAACTTCTGACCTTTTGGTGAAAGCTGAGAACTCCTGACTGTAACATATTCTGTATGAA  
CTTTATCTAAAGAAAAATAAATCTGTTCTGGGCTCTTCTCTG

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**FIGURE 4066**

MRSAAVLALLLCAGQVTALPVNSPMNKGDTVMKCIVEVISDTLSKPSMPVVSQECFETLRGDERILSILRHQNL  
LKEQLDLALQGAKERAHQQKKHSGFEDELSEVLENQSSQAEKAEVEEPSSKDVMEKREDSKEAEKSGEATDGAR  
PQALPEPMQESKAEGNNQAPGEEEEEEEEATNTHPPASLPSQKYPGPAEGDSEGLSQGLVDREKGLSAEPGWQA  
KREEEEEEEAEAGEEAVPEEEGPTVVLNPHPSLGYKEIRKGESRSEALAVDGAGKPGAEAAQDPEGKGEQEH  
QQKEEEEEMAVVPQGLFRGGKSGELEQEEERLSKEWEDSKRWSKMDQLAKELTAEKRLEGQEEEDNRDSSMKLS  
FRARAYGFRGPGPQLRRGWRPSSREDSLEAGLPQVRGYPEEKKEEEGSANRRPEDQELESLSAIEAELEKVAHQ  
LQALRRG

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**FIGURE 4067**

GACTGCGCGCCCCAGCTCCGATCCCCGTTCCGCGTCCCCGCCGCCGGGAGGAGGTGCCCACTCGCTCGCGGCGCG  
CGCCGGCCGCCAGACTCGGCCTGTGGGCGATTTCCTCCGGACCCAGGCTCCCCGCCGAGGAGGAAGATGCAGAC  
CTTTCTGAAAGGGAAGAGAGTTGGCTACTGGCTGAGCGAGAAGAAAATCAAGAAGCTGAATTTCCAGGCCTTCGC  
CGAGCTGTGCAGGAAGCGAGGGATGGAGGTTGTGCAGCTGAACCTTAGCCGGCCGATCGAGGAGCAGGGCCCCCT  
GGACGTCATCATCCACAAGCTGACTGACGTCATCCTTGAAGCCGACCAGAATGATAGCCAGTCCCTGGAGCTGGT  
GCACAGGTTCCAGGAGTACATCGATGCCACCCTGAGACCATCGTCTGGACCCGCTCCCTGCCATCAGAACCCT  
GCTTGACCGTCCAAGTCTATGAGCTCATCCGAAGATTGAGGCCTACATGGAAGACGACAGGATCTGCTCGCC  
ACCCTTCATGGAGCTCACGAGCTGTGCGGGGATGACACCATGCGGCTGCTGGAGAAGAACGGCTTGACTTTCCC  
ATTCATTTGCAAAACCAGAGTGGCTCATGGCACCACCTCTCACGAGATGGCTATCGTGTTCAACCAGGAGGGCCT  
GAACGCCATCCAGCCACCCTGCGTGGTCCAGAATTTTCATCAACCACAACGCCGCTCTGTACAAGGTGTTTCGTGGT  
TGGCGAGTCTTACACCGTGGTCCAGAGGCCCTCACTCAAGAATCTCTCCGAGGCACATCAGACCCTGAGTCCAT  
CTTCTTCAACAGCCACAACGTGTCAAAGCCGGAGTCTGTCATCGGTCTGACGGAGCTGGACAAGATCGAGGGCGT  
GTTTCGAGCGCGCGAGCGACGAGGTTCATCCGGGAGCTCTCCCGGCCCTGCGGCAGGCACTGGGCGTGTCACTCTT  
CGGCATCGACATCATCATCAACAACCAGACAGGGCAGCAGCCGTCATTGACATCAATGCCTTCCCAGGCTACGA  
GGGCGTGAGCGAGTTCTTTCACAGACCTCCTGAACCACATCGCCACTGTCTGTCAGGGCCAGAGCACAGCCATGGC  
AGCCACAGGGGACGTGGCCCTGTGTGAGGCACAGCAAGCTTCTGCGCCGAGCCGGCGGGCGGCGCTGGTGGGCGAGCG  
GACATGCAGCGCCAGCCCCGGCTGTGTGCGGCAGCATGATGGGCCAGGACGCGCCCTGGAAGGCTGAGGCCGACGC  
GGGCGGCACCCGCAAGCTGCCGCACAGAGACTCGGCTGCAACGCCGGCGTGTGCGCCAGCTTCCAGCAGCATTG  
TGTGGCCTCCCTGGCCACCAAGGCCTCCTCCAGTAGCCACGGAGCCGGGACCCAGAGGGGACGCGCAGGGCGCA  
GAGCACACCCGCTGGGCCAGCAGCTCCCAACGGCGATGCTACTACTAAGAATCCCAGTGATCTGATTCTTCTGT  
TTTTTAATTTTAACTGATTCTCTGATGTATGATCTAAATGAGGGGTAGTGGGGGATGGAAGAGAGTACCAGG  
TGGTCCACCGTTGGGGAGTGGGGCGTCCGCCCTGCTCTCTACTGTGCAGACCTCCTAACTGAGTTTACACAGCT  
TGTGTTTGCAACACTAGGTCTGGATGGGAGGTGAGGGGTGTGCGTATGGCTGCCATGCCAGTGTCTGTGCACATC  
CCTGTCTGTTGGTCTCCATGGCCACTGTGGACCGGGACCCTTGGGGGAAGCCTGCCCATGTGGGGCTGTGGGAGG  
CTGATCGGTGCATGTGAGAGTGGCTTCCCTTCTGCCTGACTCCCCACTCCCTGACCTGCCCCCTTCCCTGTTTTTC  
CTCCTACTGGTCTCCACCAAGGCTTTGTTAGCCCCCACCCTGCCTGGTGTGCAGCTAACCCTCCCTCCCCACAG  
CCAGAGGAGGCCACAGACCCCTCAGGGGAGTTCGCGCTGGGGTCTGGGCTGTGCTCCCTCACTAAAGGGAAGGA  
AAGGAAGCTGGGCGTCTCTGGGCCCCCAACACACGTCCCATTTAGCCCTGCACAGCGGTCTCCTTCCCCTAAG  
CCAGCACTGCTGCTCCCTGGAGCCCGGGAAGGAGGTGCCTGGCTGGAGGCCCGAGCCGATGGCGCTGTGCTGA  
GGATTTGTGCTGTGATTTGGGCAATCATTCCAGGTCTTTGGGCTCCACCCCTTGTCTCTAGTGGACATTTGA  
GATCAGAGAGCACACAGGGCTGGCTTTGTGCCCTAACCCTGGGATGCAGCCTGCCTTTCCATAAAGTCACCTA  
GGTGAGGATAGGCGCGGGAGCCTCGGCATGACACCATGGAGATCGGGGCCCTCTTCCCAGTGGGTTCACTCCTTT  
TCACACCTGCTGGGTCCCTCCTCACCCAGCAGGCCTGGTCCACCTCTCATTGCAAGCCCCAAGCACTGAGCCAGC  
AGGTGCCAGGGAGCCACCCGCCCCCATCGCTTCTGCACACCTCAGACTCACCCATCACCTTGGCAGCAAAGCA  
CTGGCTCTGCCGTCTGACCCCTGATCCAGGCAGCCCCCTCTGCAGAGAAAAGGGTTGGGGAGAAGCCTCTGCAGT  
CCTGGAAGATGTGGGGTGTGGGTGAGAGGCATCAGCCCCACAAGTATGTTTTGTGTCTTAAGATAGCAGTTT  
ACTTTGAAAAAGTGA AAAAGGCTTCCGGGCTGTCTCTGCCAGTGAGATGGAGGACGCTAGAGAAAAGTGTGAG  
TGTCCCGAGAGAGGCCCGCCAGCCAGTGCATGGAGGTCTTCGGCCTGGCTCAGCTGGGCTGCAGGATGCCCACT  
TTGAGGAGGGAGGCACAGGGCTTGGGCGAGGGGCAGAGGCCATCAGAACTGCCCGGCTTTTTTGGAACTGAGGA  
CCCAACAACTAACACGTTTACACGACTTGAGTTTGAACCCGATTAATGTCTGTACGTACCTTTCCTAGTTC  
TGACCTGAGCCCTGGGGAACAGGAAAGCGTGGCTGGCTCTTGCACTGCTTTGTCTCCAAAATAAACTACTGAA  
ATCAAAACCGCA

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**FIGURE 4068A**

GTATTCTCCGCCGCCGCCACGCCCTCGAGGTCCCCGCCACCGAACCAGCGCGGAGCCCCGCCGCGCCTCCCGCG  
GCATTCCCGCACC GGATCGCTCCTCGCTGGGGCGGGACCTGGCCTGGCGGCTCTGGTCACTATGAGTGAAACATC  
TTTCAACCTAATATCAGAAAAATGTGACATTCTATCCATTCTTCGGGACCATCCTGAAAACAGGATTTACCGGAG  
GAAAATCGAGGAACCTCAGCAAAAGGTTACCGCCATCCGCAAGACCAAAGGGGATGGGAACCTGCTTCTACAGGGC  
CTTGGGCTATTCTACCTGGAGTCCCTGCTGGGGAAGAGCAGGGAGATCTTCAAGTTCAAAGAACCGCTACTGCA  
GACCCCAAATGACCTTCTGGCTGCTGGCTTTGAGGAGCACAAGTTTCAAGAACTTCTTCAATGCTTTTTACAGTGT  
GGTGAACCTGGTAGAGAAGGATGGCTCAGTGTCCAGCCTGCTGAAGGTGTTCACGACCAGAGTGCCTCGGACCA  
CATCGTGCAGTTCTCGCCTGCTCACGTCGGCCTTCATCAGGAACCGAGCAGACTTCTTCGGGCACTTCAATTGA  
TGAGGAGATGGACATCAAAGACTTCTGCACTCACGAAGTAGAGCCCATGGCCACGGAGTGTGACCACATCCAGAT  
CACGGCGTTGTGCGCAGGCCCTGAGCATTGCCCTGCAAGTGGAGTACGTGGACGAGATGGATACCGCCCTGAACCA  
CCACGTGTTCCCTGAGGCCGCCACCCCTTCCGTTTACCTGCTCTATAAAACATCCCCTACAACATCCTTTATGC  
AGCCGATAAACATTGATTAATTTTAGGCCATGCAGTGGAACTGTACCTAATGGGACTGCATTCTGAATGGAAC  
ATTCCGGCTCTTCAATTTTTTAAGCAATTTAGACTGTAGCAAGAAAATGTGCAGCCTTTTGGGCAAAGCCCCCTGG  
GAACGAGGCCTATCCACTATGGAATGGAATCTGGTAGGATTTTTAGTATTTATTTTAAATGGAGGGACAAATG  
CTTTCTAACTGGGCCCCCGACTCCGCACCCAGTTTCGACGTGAGGCCCTGGGTGGGTACCTGCCCCCTCTCTGGAC  
TTGTTTCTTCAACTGGAGGAGGTCCCTGCCTATGCTGACATTCCATTGTAGAAAAATGGGGCCTCTGGTGTCTCT  
TTACCAGGGGCAGTGCCCTCTCTGCGGGGGAGGAAAAGCTCAAGGTTAGCTGTCTTAACCCAAGTGAATTACCAGG  
CCTACAAAAGAGTCCAGTCCAGTCACTTGTGGACTGGGCTCTGACAGATGGCCTATTGAGGTCAACTTGAATGT  
GAGGGCTACGGTGTGGTTTCAAACATTCAATGATGGATGATTTTTCTACCCCTAACTTAAGGAGAAAAA  
GACTTCCTTTTTTGGCAAAGTCCAGAAAGGGGCCTTAGCCTTTAGTAGGAGCTCAAATTGTTGGGGCCCCCTCT  
ACCTCTCTCAGGGCTAGAACTGCCTGACTCTTGGTGGACGAGCCCTTCAGGGTTCGTCTTCAGCCCCACCTGGA  
CAGAGGCTTACAAGACTAGGGTCTGGACCAGAATCTGTGATTTCTGTCTGGGACCAGGAAGCCGAGCTGTCCC  
ATCATCCCCAGCAATCCTAGAAAGTGGAGTCTGGATACTTCAAGGATAGAAGTGTGGCACGCACAGCCATGGAC  
CCAGCTGAGCAGAGCAGACGCTTTCAGGCTGCCCCCTGGCTTCTTCTCCCTTTCCCGCTTCTGCTCTCTTTATG  
GACTGGTCAGAGGGTAGGTGGGAAAGAACAGACAAGCCATGGGAAGTTGGCAGTGGGGAGATTTCCACTGTGGAA  
ACCGCCTGGGAATTCGGGCCAGCAGCTTCTCCTTCAGCCACCTGGCCATACCCCTTAAATAAGCCCCCTCACCTT  
GCTGCCTCAGGACCTTCAAGATTCCATCTGTGGGCTGGCCGGCAAGATGGCAACAGTGGGGACCCACACCCTGGC  
TGGGCAGAGGTGTGCTAGCAACCTCTCTTCTCTATAAGAGGAAATGGAAAATGCAGGGTGTGGAATTGCCCTT  
TGGGGTCTTCTTAAATGAAGGCCACCTTCTCACAGGTTTCATTCTGCAGGGATTTACTGGAATCTATTGGTGC  
TGCTGCATGAGTCTGCTGACAACCTGACTGCACAAGGACTGGGTAGCAGACTCCTCAGAGTCTCTTGACACAAA  
TGTCAGATTTGTGTCACTCTTCTGCCTTCGTGAAAAGCCAATAGCACTCTCAGATATCAGGGGATTTTAGTTCCA  
AGCAGGGACCTGGTTTCCATACTGCCCTCAGCTGGAGTTTGGATCCAAAGGCTCTGGCTAAGTCATTATGTCAC  
TTTTTCACAGGAATGTAATTTGACTGTCACTCTGAATTTGTTTCACTGTCCCACCATGGTCTATGAGAAGTACA  
CTGGAAGCGTGGGGGGAACACATGACATGATTTGTGAATATCATCATCTTTGCCAGACAAGTCTCCAGGGGATCC  
CTGTTTCCCACTGAAAGGTGTGAACGGACACACACAGCCTGGATGACGCCTTGGCTGTCTAAGGGGCTGTA  
AGGTGGGCTCTGGGCCTTCCAGCTAGGCTCTCAAGCACAGCAGAAGCCTCACTGGGCTGCTATGTCTCTGTATTT  
GTGGCTTGTGTGGTAGCCTCAGAAGCAGAGCTGTTTGGCAGACTGGCTGGAGAAATCCCTCTAGGAGACTTGCC  
TGTGCTGTGCTTCCAGGTACAGAGCCCCCGGAACTCACAGGGGCCCTCTTCCAGAAAAGAATCTATTCTAT  
CACTTCAGAATCAGGACACTCAAGCTCTGGCAGAGGAAGGCCAAGTTACTTTTCACTGGTCTTACCCTCTGCTTTT  
CCCTTTTTGCAAAAAACCACTGGCCAAATCCGAACCATTGCCCTTGTTCCTCCACGTTCTCTCTCAGATCTTG  
TCTCGAAGGGAAAACATAGTGGATGAAAAGGTGTGGCAGGCTTTGGCACCTTGTTAAATTTCTAGTCATCTGTG  
GATGTTACCTTGCTGTGCCACAGCAGCCAGTACCCCTGGCCAGTCCCACTTCTGGATAATTCTCTACCCCTACC  
CCACAGAGCCATCTCTCTCCAGACCAAAAGCTGGAAGGAGAGTTGCTTTGAGAGCTTGTTTTTACAATGCGATGT  
TTATTATGATACTTCTCTCCAAAGGAACTTTTAAATCAATGGGAACAATTAGCAACAGAAAGAGCACAGTCCC  
TGCTTTTACTGGGTTCTTATTTAAGCACAAATGAGAGCTCTGGAGCCAGAATGCCAGGGTCTAACTTCAGCA  
TTCACCTACTAGCTGTATGATCTTGGCCAAGTCACTTCACCTCCCTGAGCCCCAATTCCCAAGTTTGTGAAATGG  
CAACAATACCTATGTGTCACTGGATTATTGGTTAAACAGAATGAGATTCTTGTGTGAAAATAGCTATTATACC  
TGACACACTCATCGTATGGGCTCTGCAAAGGATATCCCCAACCTGTCTTCTGACAGGAAGCATAGGGCACT

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**FIGURE 4068B**

GCAGATGGGGAAGCATGTCACCTTGGCAGTGACTCGGTGGCTTCCCAAGCAGGAGTGTGAGGGGAACCATGAGAG  
AGAGTCTAGGAGCAAACACATCACCACCCTGAGCAGATACAGGAGTGGGGAGGGGGCTGTAACTCAGTGAGTGGC  
TTCCAGGGGCCCCAGGCCCTGCTGGATGTGGGCCAAGCCCTACAGCTTCCCTAGGCAGTAAGTAAAAACATTCTC  
CTAGCATTAAAAATGGTTTCAT

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**FIGURE 4069**

CCGGAAGTGCAGTTGCTGCTGCAGCTGAGGTACAGCGGCGGTTTCTGAGGTTCTTCACTCGCGACTGACGGAGCT  
GCGGTGGCGTCTCCACACGCAACCATGAAGTTGAAGGACACAAAATCAAGGCCAAAGCAGTCAAGCTGTGGCAA  
TTTCAGACAAAGGGAATCAAAGTTGTGGGAAAATGGAAGGAAGTGAAGATTGACCCAAATATGTTTGCAGATGGA  
CAGATGGATGACTTGGTGTGCTTTGAGGAATTGACAGATTACCAAGTTGGTCTCCCTGCCAAGAATCCCTCCAGT  
CTCTTCTCAAAGGAAGCACCCAAGAGAAAGGCACAAGCTGTTTCAGAAGAAGAGGAGGAGGAGGAGGAAAGTCT  
AGCTCACCAAAGAAAAAGATCAAGTTGAAGAAAAGTAAAAATGTAGCAACTGAAGGAACCAAGTACCCAGAAAGAA  
TTTGAAGTGAAGATCCTGAGCTGGAGGCCCAGGAGATGACATGGTTTGTGATGATCCGGAGGCTGGGAGATG  
ACATCAGAAAACCTGGTCCAACTGCTCCAAAAAGAAGAAAAATAAAGGGAAAAAAGGGTTGGAGCCTTCTCAG  
AGCACTGCTGCCAAGGTGCCCAAAAAAGCGAAGACATGGATTCTGAAGTTCATGATCAGAAAGCAGATGTGTCA  
GCTTGGAAAGGACCTGTTTGTCTCCAGGCCGGTTCTCCGAGCACTCAGCTTTCTAGGCTTCTCTGCACCCACACCA  
ATCCAAGCCCTGACCTTGGCACCTGCCATCCGTGACAACTGGACATCCTTGGGGTGCTGAGACAGGAAGTGGG  
AAAACCTCTTGCTTTGCCATCCCAATGATTTCATCGGGTGTGTCAGTGGCAGAAGAGGAATGCTGCCCCCTCTCCA  
AGTAACACCGAAGCACCACCTGGAGAGACCAGAAGTGGAGCCGAGCTGAGACTAGATCACCAGGCAAGGCTGAA  
GCTGAGTCTGATGCATTGCCTGACGATACTGTAATTGAGAGTGAAGCACTGCCAGTGATATTGCAGCCGAGGCC  
AGAGCCAAGACTGGAGGCACTGTCTCAGACCAGCGCTTGTCTTTGGTGACGATGATGCTGGTGAAGGCCCTTCT  
TCCCTGATCAGGGAGAAACCTGTTCCCAAACAGAATGAGAATGAGGAGGAAAATCTTGATAAAGAGCAGACTGGA  
AATCTAAAAACAGGAGTTGGATGACAAAAGCGCCACCTGTAAGGCATATCCAAAGCGTCCTCTGCTTGGACTGGTT  
CTGACTCCCACTCGAGAGCTGGCCGTCCAGGTCAAACAGCACATTGATGCTGTGGCCAGGTTTACAGGAATTA  
ACTGCTATTTTGGTTGGTGGAAATGTCCACGCAGAAACAGCAGAGGATGCTGAACCGTCGTCCTGAGATTGTGGTT  
GCTACTCCAGGCCGGCTGTGGGAATTAATTAAAGAAAAGCATTATCATTTGAGGAACCTTCGGCAGCTCAGGTGC  
CTGGTAGTGGATGAGGCTGACCGGATGGTTGAGAAAGGCCATTTTGTGAGCTCTCACAGCTGCTAGAGATGCTC  
AATGACTCCCAATACAACCCAAAGAGACAAACGCTTGTTTTTCTGCCACACTCACCTGGTGCATCAGGCTCCT  
GCTCGAATCCTTCATAAGAAGCACACCAAGAAAATGGATAAAACAGCCAAACTTGACCTCCTTATGCAGAAAATT  
GGCATGAGGGGCAAGCCCAAGGTCATTGACCTCAACAAGGAATGAGGCCACGGTGGAGACGCTAACAGAGACCAAG  
ATCCATTGTGAGACTGATGAGAAAGACTTCTACTTGTACTACTTCCTGATGCAGTATCCAGGCCGACGCTTAGTG  
TTTGCCAAACAGTATCTCTGCATCAAACGCCCTCTCTGGGCTCCTCAAAGTCCTTGATATCATGCCCTTGACCTG  
CATGCCGTGATGCACCAGAAGCAGAGGCTCAGAAACCTGGAGCAGTTTGCCCGTCTGGAAGACTGTGTTCTCTTG  
GCAACAGATGTGGCAGCTCGGGGTCTGGATATTCTTAAAGTCCAGCATGTATCCATTACCAGGTCCACGTAAC  
TCGGAGATTTATGTCCACCGAAGTGGTCGAACTGCTCGAGCTACCAATGAAGGCCCTCAGTCTGATGCTCATTGGG  
CCTGAGGATGTGATCAACTTTAAGAAGATTACAAAACGCTCAAGAAAGATGAGGATATCCCACTGTTCCCCGTG  
CAGACAAAATACATGGATGTGGTCAAGGAGCGAATCCGTTTAGCTCGACAGATTGAGAAATCTGAGTATCGGAAC  
TTCCAGGCTTGCTGCACAACCTTTGGATTGAGCAGGCAGCAGCTGCCCTGGAGATTGAGCTGGAAGAAGACATG  
TATAAGGGAGGAAAAGCTGACCAGCAAGAAGAACGTCGGAGACAAAAGCAGATGAAGGTTCTGAAGAAGGAGCTG  
CGCCACCTGCTGTCCCAGCCACTGTTTACGGAGAGCCAGAAAACCAAGTATCCCACTCAGTCTGGCAAGCCGCC  
CTGCTTGTGTCTGCCCCAAGTAAGAGCGAGTCTGCTTTGAGCTGTCTCTCCAAGCAGAAGAAGAAGACAAAG  
AAGCCGAAGGAGCCACAGCCGGAACAGCCACAGCCAAGTACAAGTGCAAATTAACTGGTCAAGTGTGTCAGTGAC  
TGCACATTGGTTTCTGTTCTCTGGCTATTTGCAAAACCTCTCCACCCTTGTTGTTTCACTCCACCACCAACCCCA  
GGTAAAAAAGTCTCCCTCTCTTCCACTCACACCCATAGCGGGAGAGACCTCATGCAGATTGTCATTGTTTGGAG  
TAAGAATTCAATGCAGCAGCTTAATTTTTCTGTATTGCAGTGTATTATAGGCTTCTTGTGTGTTAACTTGATTTC  
ATAAATTAAAAACAATGGTCAGAAAAA



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**FIGURE 4070**

MKLKDTKSRPKQSSCGKFQTKGIKVVGKWKEVKIDPNMFADGQMDDLVCFEELTDYQLVSPAKNPSSLFSKEAPK  
RKAQAVSEEEEEEEGKSSSPKKIKLKSKNVATEGTSTQKEFEVKDPELEAQGDDMVCDDPEAGEMTSENLVQT  
APKKKKKNKGKGLEPSQSTAAKVPKKAKTWIPEVHDQKADVSAWKDLFVPRPVLRLSFLGFSAPTPIQALT LAP  
AIRDKLDILGAAETGSGKTLAFAIPMIHAVLQWQKRNAAPPPSNTTEAPPGETRTEAGAETRSPGKAEAESDALPD  
DTVIESEALPSDIAAEARAKTGGTVSDQALLFGDDDDAGEGSSLIREKVPKQNEENEEENLDKEQTGNLKQELDD  
KSATCKAYPKRPLLGLVLTPTRELAVQVKQHIDAVARFTGIKTAILVGGMSTQKQQRMLNRRPEIVVATPGRLWE  
LIKEKHYHLRNLRLCLVVDEADRMVEKGHFAELSQLLEMLNDSQYNPKRQTLVFSATLTLVHQAPARILHKKH  
TKKMDKTAKDLLMQIGMRGPKVIDLTRNEATVETLTETKIH CETDEKDFYLYYFLMQYPGRSLVFANSISCI  
KRLSGLLKVL DIMP LTLHACMHQKQRLRNLEQFARLEDCVLLATDVAARGLDIPKVQHVIHYQVPRTSEIYVHRS  
GRTARATNEGLSLMLIGPEDVINFKKIYKTLKKDEDIPLFPVQTKYMDVVKERIRLARQIEKSEYRNFQACLHNS  
WIEQAAAAL EIELEEDMYKGGKADQQEERRRQKQMKVLKKELRHLLSQPLFTESQKTKYPTQSGKPPLLVSAPSK  
SESALSCLSKQKKKKTKKPKEPQPEQPQSTSAN

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**FIGURE 4071**

GCTGAAGTTGAGGATCTCTTACTCTCTAGGCCACGGAATTAACCCGAGCAGGCATGGAGGCCTCTGCTCTCACCT  
CATCAGCAGTGACCAGTGTGGCCAAAGTGGTCAGGGTGGCCTCTGGCTCTGCCGTAGTTTTGCCCTGGCCAGGA  
TTGCTACAGTTGTGATTGGAGGAGXXXXXXXXXXXXXCTGTGCCCATGGTGCTCAGTGCCATGGGCTTCACTG  
CGGCGGGAATCGCCTCGTCTCCATAGCAGCCAAGATGATGTCCGCGGCGGCCATTGCCAATGGGGGTGGAGTTG  
CCTCGGGCAGCCTTGTGGCTACTCTGCAGTCACTGGGAGCAACTGGACTCTCCGGATTGACCAAGTTCATCCTGG  
GCTCCATTGGGTCTGCCATTGCGGCTGTCATTGCGAGGTTCTACTAGCTCCCTGCCCTCGCCCTGCAGAGAAGA  
GAACCATGCCAGGGGAGAAGGCACCCAGCCATCCTGACCCAGCGAGGAGCCAACTATCCCAAATATACCTGGGGT  
GAAATATACCAAATTCTGCATCTCCAGAGGAAAATAAGAAATAAAGATGAATTGTTGCAACTCTT

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**FIGURE 4072**

ACTGTACACATGCTAGGGTCCAGGACAGCAGGACCAAGCCAGCAGAAACAGCCTGAGCCCACCGCAGACTGGCCT  
GGCTATACTGGACAATGCCACTCCTCCTGTACACCTGTCTTCTCTGGCTGCCCACCAGCGGCCTCTGGACCGTCC  
AGGCCATGGATCCTAACGCTGCTTATGTGAACATGAGTAACCATCACCGGGGCTGGCTTCAGCCAACGTTGACT  
TTGCCCTCAGCCTGTATAAGCACCTAGTGGCCTTGAGTCCCAAAAAGAACATTTTCATCTCCCTGTGAGCATCT  
CCATGGCCTTAGCTATGCTGTCCCTGGGCACCTGTGGCCACACACGGGCCAGCTTCTCCAGGGCCTGGGTTTCA  
ACCTCACTGAGAGGTCTGAGACTGAGATCCACCAGGGTTTCCAGCACCTGCACCAACTCTTTGCAAAGTCAGACA  
CCAGCTTAGAAATGACCATGGGCAATGCCTTGTTTCTTGATGGCAGCCTGGAGTTGCTGGAGTCATTCTCAGCAG  
ACATCAAGCACTACTATGAGTCAGAGGTCTTGCTATGAATTTCCAGGACTGGGCAACAGCCAGCAGACAGATCA  
ACAGCTATGTCAAGAATAAGACACAGGGGAAAATTGTCGACTTGTTTTTCAGGGCTGGATAGCCCAGCCATCCTCG  
TCCTGGTCAACTATATCTTCTTCAAAGGCACATGGACACAGCCCTTTGACCTGGCAAGCACCAGGGAGGAGA  
TCTATGTGGACGAGACAACCTGTGGTGAAGGTGCCCATGATGTTGCAGTCGAGCACCATCAGTTACCTTCATGACT  
CGGAGCTCCCCTGCCAGCTGGTGCAGATGAACTACGTGGGCAATGGGACTGTCTTCTTCATCCTTCCGGACAAGG  
GGAAGATGAACACAGTCATCGCTGCACTGAGCCGGGACACGATTAACAGGTGGTCCGCAGGCCTGACCAGCAGCC  
AGGTGGACCTGTACATTCAAAGGTCACCATCTCTGGAGTCTATGACCTCGGAGATGTGCTGGAGGAAATGGGCA  
TTGCAGACTTGTTACCAACCAGGCAAATTTCTCACGCATACCCAGGACGCCCAGCTGAAGTCATCAAAGGTGG  
TCCATAAAGCTGTGCTGCAACTCAATGAGGAGGGTGTGGACACAGCTGGCTCCACTGGGGTCACCCTAAACCTGA  
CGTCCAAGCCTATCATCTTGCGTTTTCAACCAGCCCTTCATCATCATGATCTTCGACCACTTCACCTGGAGCAGCC  
TTTTCTGGCGAGGGTTATGAACCCAGTGTAAAGAGACCACCCAGAGCCTCAGCACTGTCTGACTTTGGGAA  
CCAGGGATCCACAGAAATGTTTTGGAGAGCGGGAGGTTTCCCCCAATCTCCTCCAAGTTCTTCTCCCTCCAACC  
AGAGTTGTGTCTAACTTTAGGCATCTTTTAATAAATGTCATTGCGACTCTG

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**FIGURE 4073**

GACAATGCCGTCTTCTGTCTCGTGGGGCATCCTCCTGCTGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGC  
TGAGGATCCCCAGGGAGATGCTGCCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAA  
GATCACCCCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCACCAATAT  
CTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGACCAAGGCTGACACTCACGATGA  
AATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTCCGGAGGCTCAGATCCATGAAGGCTTCCAGGAACCTCT  
CCGTACCCCTCAACCAGCCAGACAGCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCCTCAGCGAGGGCCTGAA  
GCTAGTGGATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCGGGGACAC  
CGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGGAAAATTGTGGATTGTGTCAGGA  
GCTTGACAGAGACACAGTTTTTGTCTGCTGGAATTACATCTTCTTTAAAGGCAAATGGGAGAGACCCTTTGAAGT  
CAAGGACACCGAGGAAGAGGACTTCCACGTGGACCAGGCGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGG  
CATGTTTAACATCCAGCACTGTAAGAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGGCAATGCCACCGC  
CATCTTCTTCTGCTGCTGATGAGGGGAACTACAGCACCTGGAAAATGAACTCACCCACGATATCATCACCAAGTT  
CCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACATTTACCCAACTGTCCATTACTGGAACCTATGATCTGAA  
GAGCGTCCCTGGGTCAACTGGGCATCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGC  
ACCCCTGAAGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGACTGAAGCTGCTGGGGC  
CATGTTTTTAGAGGCCATACCCATGTCTATCCCCCGGAGGTCAAGTTCAACAAACCCTTTGTCTTCTTAATGAT  
TGAACAAAATACCAAGTCTCCCTCTTCATGGGAAAAGTGGTGAATCCCAACCAAAAATAACTGCCTCTCGCTCC  
TCAACCCCTCCCTCCATCCCTGGCCCCCTCCCTGGATGACATTAAGAAGGGTTGAGCTGG

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**FIGURE 4074**

AGAACAAAGAACAGCCACCATGCAGCTCTTCCTCCTCTTGTGCCTGGTGCTTCTCAGCCCTCAGGGGGCCTCCCT  
TCACCGCCACCACCCCGGGAGATGAAGAAGAGAGTCGAGGACCTCCATGTAGGTGCCACGGTGGCCCCCAGCAG  
CAGAAGGGACTTTACCTTTGACCTCTACAGGGCCTTGGCTTCCGCTGCCCCCAGCCAGAGCATCTTCTTCTCCCC  
TGTGAGCATCTCCATGAGCCTGGCCATGCTCTCCCTGGGGGCTGGGTCCAGCACAAAGATGCAGATCCTGGAGGG  
CCTGGGCCTCAACCTCCAGAAAAGCTCAGAGAAGGAGCTGCACAGAGGCTTTCAGCAGCTCCTTCAGGAACTCAA  
CCAGCCCAGAGATGGCTTCCAGCTGAGCCTCGGCAATGCCCTTTTCACCGACCTGGTGGTAGACCTGCAGGACAC  
CTTCGTAAGTGCCATGAAGACGCTGTACCTGGCAGACACTTTCCTTACCAACTTTAGGGACTCTGCAGGGGCCAT  
GAAGCAGATCAATGATTATGTGGCAAAGCAAACGAAGGGCAAGATTGTGGACTTGCTTAAGAACCTCGATAGCAA  
TGCGGTCGTGATCATGGTGAATTACATCTTCTTTAAAGCTAAGTGGGAGACAAGCTTCAACCACAAAGGCACCCA  
AGAGCAAGACTTCTACGTGACCTCGGAGACTGTGGTGCGGGTACCCATGATGAGCCGCGAGGATCAGTATCACTA  
CCTCCTGGACCGGAACCTCTCCTGCAGGGTGGTGGGGGTCCCCTACCAAGGCAATGCCACGGCTTTGTTCATTCT  
CCCCAGTGAGGGGAAAGATGCAGCAGGTGGAGAATGGACTGAGTGAGAAAACGCTGAGGAAGTGGCTTAAGATGTT  
CAAAAAGAGGGCAGCTCGAGCTTTACCTTCCCAAATTCTCCATTGAGGGCTCCTATCAGCTGGAGAAAGTCTCCC  
CAGTCTGGGGATCAGTAACGTCTTCACCTCCCATGCTGATCTGTCCGGCATCAGCAACCACTCAAATATCCAGGT  
GTCTGAGATGGTGCACAAAGCTGTGGTGGAGGTGGACGAGTCGGGAACCAGAGCAGCGGCAGCCACGGGGACAAT  
ATTCACTTTTCAGGTGGGCGCCCTGAACTCTCAGAGGCTAGTGTTC AACAGGCCCTTTCTGATGTTTATTGTGGA  
TAACAACATCCTCTTCCTTGGCAAAGTGAACCGCCCCCTGA

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**FIGURE 4075**

CAGAGTTGAGAATGGAGAGAATGTTACCTCTCCTGGCTCTGGGGCTCTTGGCGGCTGGGTTCTGCCCTGCTGTCC  
TCTGCCACCTAACAGCCCACCTTGACGAGGAGAATCTGACCCAGGAGAACCAAGACCGAGGGACACACGTGGACC  
TCGGATTAGCCTCCGCCAACGTGGACTTCGCTTTCAGCCTGTACAAGCAGTTAGTCCTGAAGGCCCTGATAAGA  
ATGTCATCTTCTCCCCACTGAGCATCTCCACCGCCTTGGCCTTCTGTCTCTGGGGGCCATAATACCACCCTGA  
CAGAGATTCTCAAAGGCCCTCAAGTTCAACCTCACGGAGACTTCTGAGGCAGAAATTCACCAGAGCTTCCAGCACC  
TCCTGCGCACCTCAATCAGTCCAGCGATGAGCTGCAGCTGAGTATGGGAAATGCCATGTTTGTCAAAGAGCAAC  
TCAGTCTGCTGGACAGGTTACGGAGGATGCCAAGAGGCTGTATGGCTCCGAGGCCTTTGCCACTGACTTTCAGG  
ACTCAGCTGCAGCTAAGAAGCTCATCAACGACTACGTGAAGAAATGGAAGTAGGGGGAAAATCACAGATCTGATCA  
AGGACCTTGACTCGCAGACAAATGATGGTCCTGGTGAATTACATCTTCTTTAAAGCCAAATGGGAGATGCCCTTTG  
ACCCCCAAGATACTCATCAGTCAAGGTTCTACTTGAGCAAGAAAAAGTGGGTAATGGTGCCCATGATGAGTTTGC  
ATCACCTGACTATACCTTACTTCCGGGACGAGGAGCTGTCTGCACCGTGGTGGAGCTGAAGTACACAGGCAATG  
CCAGCGCACTCTTCATCCTCCCTGATCAAGACAAGATGGAGGAAGTGGAAGCCATGCTGCTCCCAGAGACCCTGA  
AGCGGTGGAGAGACTCTCTGGAGTTCAGAGAGATAGGTGAGCTCTACCTGCCAAAGTTTTCCATCTCGAGGGACT  
ATAACCTGAACGACATACTTCTCCAGCTGGGCATTGAGGAAGCCTTCACCAGCAAGGCTGACCTGTGAGGGATCA  
CAGGGGCCAGGAACCTAGCAGTCTCCCAGGTGGTCCATAAGGCTGTGCTTGATGTATTTGAGGAGGGCACAGAAG  
CATCTGCTGCCACAGCAGTCAAAATCACCTCCTTTCTGCATTAGTGGAGACAAGGACCATTGTGCGTTTCAACA  
GGCCCTTCCTGATGATCATTGTCCCTACAGACACCCAGAACATCTTCTTCATGAGCAAAGTCACCAATCCCAAGC  
AAGCCTTAGAGCTTGCCATCAAGCAGTGGGGCTCTCAGTAAGGAACTTGGAATGCAAGCTGGATGCCTGGGTCTCT  
GGGCACAGCCTGGCCCCCTGTGCACCGAGTGGCCATGGCATGTGTGGCCCTGTCTGCTTATCCTTGGAAGGTGACA  
GCGATTCCCTGTGTAGCTCTCACATGCACAGGGGCCATGGACTCTTCAGTCTGGAGGGTCTGGGCCCTCCTGAC  
AGCAATAAAATAATTTCGTTGG

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**FIGURE 4076**

MERMLPLLALGLLAAGFCPAVLCHPNSPLDEENLTQENQDRGTHVDLGLASANVDFAFSLYKQLVLKAPDKNVIF  
SPLSISTALAFSLGHNHTTLTEILKGLKFNLTTETSEAEIHQSFOHLLRTLNQSSDELQLSMGNAMFVKEQLSLL  
DRFTEDAKRLYGSEAFATDFQDSAAAKKLINDYVKNNGTRGKITDLIKDLDSTMMVLVNYIFFKAKWEMPFPDQD  
THQSRFYLSKKKWVMPMMSLHHLTIPYFRDEELSCTVVELKYTGNASALFILPDQDKMEEVEAMLPELTKRWR  
DSLEFREIGELYLPKFSISRDNLDILLQLGIEEAFTSKADLSGITGARNLAVSQVVHKAVLDVFEEGTEASAA  
TAVKITLLSALVETRITIVRFNRPFMIIVPTDTQNIFFMSKVTNPKQA

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**FIGURE 4077**

TTTCCGCGCTACCTACAGAGGGGTCCATACAGCGTCGTTCTGGATTCCCGTCGTAACTTAAAGGGAACTTTAC  
AATGTCCTGGAGCGCTTGATGTCCTGCAAATGAAGGAGGAGGATGTCCTTAAGTTCCTTGTAGCAGGAACCCACTT  
AGGTGGCACCAATCTTGACTTCCAGATGGAACAGTACATCTATAAAAGGAAAAGTGATGGCATCTATATCATAAA  
TCTGAAGAGGACCTGGGAGAAGCTTCTGCTGGCAGCTCGTGCTATTATTGCTATTGAAAACCCCTGCTGATGTCAG  
TGTTATATCCTCCAGGAATACTGGCCAGAGGGCTGTGCTGAAGTTTGCTGCTGCCACTGAAGCCACTCCAATTGC  
TGGTCACTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCAGACTTCTGGGAGCCAAGGCTTCTTGTTGTTAC  
TGACCCAGGGCTGACCACCAGCCTCTCACGGAGGCATCTTATGTTAACCTACCTACCATTGCTCTGTGTAACAC  
AGATTCTCCTCTGCGCTATGTGGACATTGCCATTCCATGCAACAACCAGGGAGCTCGCTCAGTGGGTTTGATGTG  
GTGGACGCTGGCTCGGGAAGTTCTGCGCATGCGTGGCACCATTTCTCGTGAACACCTATGGGAGGTCATGCCTGA  
TCTCTACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAGCAGGCTGCTACTGAAAAGGCAGTGACCAAGGA  
GGAATTTCAAGGTGAATGGACTGCTCCAGCTCCTGAGTTCACTGCTACTAAGCCTGAGGTTGCAGACTGGTCTGA  
AGGTGTACAGGTGCCCTCTGTGCCTATTCACTAGTTCCCTACTGAAGACAGGAGTGCTCAGCCTGCCATGGAAGA  
CTGGTCTGCAGCTCCCACTGCTCAGGCCACTGAATGGGTAGGAGCAACCACTGACTGGTCTTAAAGCTGTTCTTGC  
ATAGGCTCTTAAGCAACACGGAAAAATGATTGGCGGAAAAATAAACATCAGTTTCT



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**FIGURE 4078**

MSGALDVLQMKEEDVLKFLVAGTHLGGTNLDFQMEQYIYKRKSDGIYIINLKRTWEKLLLAARAIIAIENPADVS  
VISSRNTGQRAVLKFAAATEATPIAGHFTPGTFTNQIQADFEPRLLVVTDPRADHQPLTEASYVNLPTIALCNT  
DSPLRYVDIAIPCNNQGARSVGLMWWTILAREVLRMRGTISREHLWEVMPDLYFYRDPEEIEKEEQAAATEKAVTKE  
EFQGEWTAPAPEFTATKPEVADWSEGVOVPSVPIQSSLLKTGVLSLPWKTGLQLPLLRPLNGVGATTDWS

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**FIGURE 4079**

CTTGAGAGGCTCTGGCTCTTGCTTCTTAGGCGGCCCGAGGACGCCATGGCCGAGTGCCCGACACTCGGGGAGGCA  
GTCACCGACACCCCGGACCGCCTGTGGGCCTGGGAGAAGTTCGTGTATTTGGACGAGAAGCAGCACGCCTGGCTG  
CCCTTAACCATCGAGATAAAGGATAGGTTACAGTTACGGGTGCTCTTGCGTCGGGAAGACGTCGTCTGGGGAGG  
CCTATGACCCCCACCCAGATAGGCCCAAGCCTGCTGCCTATCATGTGGCAGCTCTACCCTGATGGACGATACCGA  
TCCTCAGACTCCAGTTTCTGGCGCTTAGTGTACCACATCAAGATTGACGGCGTGGAGGACATGCTTCTCGAGCTG  
CTGCCAGATGACTTGATGTATGGTCTTGGCAGCACCTGTCTCCTTTACCCCAGGGCCTGAGCCTGGCCAGCCTAC  
AATGGGGATGTTGTGTTTCTGTTACCTTCGTTTACTATGCCTGTGTCTTCTCCACCACGCTGGGGTCTGGGAGG  
AATGGACAGACAGAGGATGAGCTCTACCCAGGGCCTGCAGGACCTGCCTGTAGCCCACTCTGCTCGCCTTAGCAC  
TACCACTCCTGCCAAGGAGGATTCCATTTGGCAGAGCTTCTTCCAGGTGCCCAGCTATACCTGTGCCTCGGCTTT  
TCTCAGCTGGATGATGGTCTTCAGCCCTCTTTCTGTCCCTTCTGTCCCTCACAGCACTAGTATTTTCATGTTGCACA  
CCCACTCAGCTCCGTGAACTTGTGAGAACACAGCCGATTACCTGAGCAGGACCTCTGAAACCCTGGACCAGTGG  
TCTCACATGGTGCTACGCCTGCATGTAAACACGCCTGCAAACGCTGCCTGCCGTTAAACACGCCTGCAAACGCTG  
CCTGCCCCGTAAACACGCCTGCAAACGCTGCCTGCCACACAGGTTACGTGCAGCTCAAGGAAAGGCCTGAAAGG  
AGCCCTTATCTGTGCTCAGGACTCAGAAGCCTCTGGGTGAGTGGTCCACATCCCGGGACGCAGCAGGAGGCCAGG  
CCGGCGAGCCCTGTGGATGAGCCCTCAGAACCCTTGGCTTGCCACGTGGAAGGGATAGAGGTTGGGTTTCCC  
CCCTTTATAGATGGTACGCACCTGGGTGTTACAAAGTTGTATGTGGCATGAATACTTTTTGTAATGATTGATTA  
AATGCAAGATAGTTTATCTAACTTCGTGCGCAATCAGCTTCTATCCTTGACTTAGATTCTGGTGGAGAGAAGTGA  
GAATAGGCAGCCCCCAATAAAAAATATTTCATGGAAAAA

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**FIGURE 4080**

MAECPTLGEAVTDHPDRLWAWKEFVYLDEKQHAWLPLTIEIKDRLQLRVLLRREDVVLGRPMTPTQIGPSLLPIM  
WQLYPDGRYRSSDSSFWRVLVYHIKIDGVEDMLLELLPDD

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**FIGURE 4081**

TGAAAATGCCTCGTGTAAGCAGCTCAAGCTGGAAGACAGAGCTCTGCAAAGAGACATCTTGCAGAACAAATTTG  
CAGTTGGAGAGATAATAACTGACATGGCAAAAAGGAATGGAAAGTAGGATTACCCATTGGCCAAGGAGGCTTTG  
GCTGTATATATCTTGCTGATATGAATTCCTCAGAGTCAGTTGGCAGTGATGCACCTTGTGTTGTAAGTGAAC  
CCAGTGACAAATGGACCTCTTTTACTGAATTAAGTTCTACCAACGAGCTGCAAAACCAGAGCAAATTCAGAAAT  
GGATTTCGTACCCGTAAGCTGAAGTACCTGGGTGTTCTTAAGTATTGGGGGTCTGGTCTACATGACAAAATGGAA  
AAAGTTACAGTTTATGATAATGGATCGCTTTGGGAGTGACCTTCAGAAAATATATGAAGCAAATGCCAAAAGGT  
TTTCTCGGAAAACCTGTCTTGCAGCTAAGCTTAAGAATTCTGGATATTCTGGAATATATTCACGAGCATGAGTATG  
TGCATGGAGATATCAAGGCCTCAAATCTTCTTCTGAACATAAGAATCCTGACCAGGTGTACTTGGTAGATTATG  
GCCTTGCTTATCGGTACTGCCAGAAGGAGTTCATAAAGAATACAAAGAAGACCCCAAGATGTCACGATGGCA  
CTATTGAATTCACGAGCATCGATGCACACAATGGCGTGGCCCCATCAAGACGTGGTGATTGGAAATACTTGGTT  
ATTGCATGATCCAATGGCTTACTGGCCATCTTCTTGGGAGGATAATTTGAAAGATCCTAAATATGTTAGAGATT  
CCAAATTAGATACAGAGAAAAATTTGCAAGTTTGATGGACAAATGTTTTCTGAGAAAAACAAACCAGGTGAAA  
TTGCCAAATACATGGAAACAGTGAAATTACTAGACTACACTGAAAAACCTCTTTATGAAAATTTACGTGACATTC  
TTTTGCAAGGACTAAAAGCTATAGGAAGTAAGGATGATGGCAAATTTGGACCTCAGTGTGTGGAGAATGGAGGTT  
TGAAAGCAAAACAATAACAAAGAAGCGAAAGAAAGAAATTGAAGAAAGCAAGGAACCTGGTGTTGAAGTACGG  
AATGGTCAAACACACAGACAGAGGAGGCCATACAGACCCGTTCAAGAACCAGAAAGAGAGTCCAGAAGTAATTCA  
GATGCTGIGAACCAGATTTCTTTCTTTGTTTTCTTTGACTTTTTCTCCTTTTCTATTTGAAGTGTTTTATT  
TTCTGTGAGTCTTGCGAGGTGAAGTAATGATTAAATACTCATGTGTTTCAGAAAACATAAACTTTTTTTATAAA  
AATATTTTGTACAATTCATTAAAGGCTAATTTATGAAATTTGAAAATCTTCAGGTTATACTCCTTAAGTTATCCC  
AAAGCCGTGTGTTTGTGATGTTTGGAGTACATATATATGAAAATTATTATGACACGCACTTTTCTAATCATTGT  
ACATTTCTCAGAGTGGATAAAAATGTTTGACAAAGTCCTCACTTTTAAGGAAATGCAAAGCTTAAATAAAACTC  
TCTTTTGTGTTGATGCA

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**FIGURE 4082**

ATGCCTGCTGCTGCGCTTCCGAGGCAGGAAGCCGAGGGACCCATGTCCTGGGAGCGGAGAACTTTCTGTGAGACAT  
CACGCCATCAAATTCTCTGTGGCACGCGCTGGGCAGAAAGGCTACCATCACCGCACTGAGATCAACAAGAAGATC  
TATAAGATTGGCCAGGGCTACCTTATCAAGGATGGCAAGCTGATCAAGAACAATGCCTCCACTGACTATGACCTA  
TCTGACAAGAGCATCAACCCTCTGGGTGGCTTTGTCCACTATGGTGAAGTGACCAATGACTTTGTCATGCTGAAA  
GGCTGTGTGGTGGGAACCAAGAAGCGGGTGCTCACCTCCGCAAGTCCTTGTGGTGCAGACGAAGCGGCGGGCT  
CTGGAGAAGATTGACCTTAAGTTCATTGACACCACCTCCAAGTTTGGCCATGGCCGCTTCCAGACCATGGAGGAG  
AAGAAAGCATTTCATGGGACCACTGAAGAAAGACCGAATTGCAAAGGAAGAAGGAGCTTAA

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**FIGURE 4083**

MPAAALPRQEAEGPMSGGELSVRHHAIKFSVARAGQKGYHHRTEINKKIYKIGQGYLIKDGKLIKNNASTDYDL  
SDKSINPLGGFVHYGEVTNDFVMLKGCVVGTKKRVLTLRKSLLVQTKRRALEKIDLKFDITTSKFGHGRFQTMEE  
KKAFMGPLKKDRIAKEEGA

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**FIGURE 4084**

CTATGATGATTGTAGGGTGGCACCTTTTTATCCAAGTTACTAGCTACACATCAGTGTTTAAAGAGAAAAAAGTG  
ACCTTTCATTTTTTTTTTCTTGAACTTGAGGAAACAAGATACATACTACTGATTTTTTTTTTCTTAAAACTAA  
ATGCATGACTGCAGAGCGGTAGAGGTGTATATTTTCATACTGTGGGGCAAAGTATTGTGCTGCTTTTGGAGA  
TGGACTGGAACGTCTGGTTTCTGTCCCCGGGCCCCGCGAGCTACGTCTATTTTCTGTAGAAGGTGCCACAGTGAGA  
CCTGGAGCCACCCCTTCCTGCCCTGGCGCCGTTTAGAGCTGGGAGCCCGTGGACTCCCGGCCTGTTTCTACCTTC  
TATTCAACCACTCTGACGTGGGGAGACAAGAAGAAATAGAACTTTTGTAGTGTGGTAAAAACATTGATTTGAA  
CTATTTTAGTAAAAGGAGTAACAAACAAGATTGTGATAGTGTCTACTTTGAGCTAGATAAATAAAGGCCTCTTTG  
TGAGCCTCCTGGCTGGGTGCTCAGTGCTTGTTTCTGTCTGGGTGGCAGGGTCAGCAGGCAGAGACAGGGCCAAG  
GCCCCCTCAAGCACCGCAGATGGGGGCTCAGTCGGGGCCCCCTTCCACAGACAGAGCCGTGGCCCCCTCAAGGTGGAC  
AGTGAGGCCGCTGCTCCTCCAGCTGCCTCTGTCTCATCACAGGCCAGAAGTGGAAGGGTTTCAAATCCAAGCCC  
CCGGGTTCTGTGTGCGTTCTACGCAGCAAGGCTTCAAAGTTTCAAACCTGGTTTGGAACTCAACCAGGTCTCCA  
AAGGAAACCAAGGCAGGCACAGGATGGGGGCAGGCTGGCTTGGCAGGCAGCTGTGCGGATCCACCCAGAGTGCCT  
TGGGAGGCAGTGGGGTTGGCTGTGGCTGCTGTGAGCTGCAGCCAGGCCTCTCCCGCGTCCCCAGGGTCTGGAAGG  
AGGGCCTCTGCACATTTTATAAGCCACAGACTGCGAAGGCCTGGAGCCCCACCTTCCACCCATAACAAAGAAAGG  
GATAGTTTCAAGAACTGCTTTTATTGGATAACTGACTGAAGGAGTCTCATTGTAAACCAAGATGGAATTCACAGT  
ATGTTGTTACATTCACACTTAAAAAATATATCTCTATGTACAGGAATTGCAAAGAGATGTAAACATACATTAAT  
TTCCAAGTACATTTCTCCCTTCTCCCTGGAGGAAAAAAAAAAGCCATCCAATGAGGCAACCCCTTCAAATAA  
TTTTAATACAAAGGATGCAAACATCAAAAAAAAAAAAAA

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**FIGURE 4085**

MGAQSGPLPQTEFWPLKVDSEAAAPPAASVSSQARSGKGFKSKPPGSCVRSTQQGFKVSNWFGTQPGPPKETKAG  
TGWGQAGLAGSCADPPRPWEAVGLAVA AVSCSQASPASPGSGRRASAHFISHRLRRPGAPPSTHNKERDSFRTA  
FIWITD



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**FIGURE 4086**

GAAAGAAAAGAGGGGAAGAGTATTAAAGACCATTCTGGCTGGGCAGGGCACTCTCAGCAGCTCAACTGCCCAGCG  
TGACCAGTGGCCACCTCTGCAGTGTCTTCCACAACCTGGTCTTGACTCGTCTGCTGAACAAATCCTCTGACCTCA  
GGCCGGCTGTGAACGTAGTTCTCTGAGAGATAGCAAACATGCCCAACAGTGAGCCCGCATCTCTGCTGGAGCTGTT  
CAACAGCATCGCCACACAAGGGGAGCTCGTAAGGTCCCTCAAAGCGGGAAATGCGTCAAAGGATGAAATTGATTCT  
TGCAGTAAAGATGTTGGTGTCTATTAAAAATGAGCTACAAAGCTGCCGCGGGGAGGATTACAAGGCTGACTGTCC  
TCCAGGGAACCCAGCACCTACCAGTAATCATGGCCCAGATGCCACAGAAGCTGAAGAGGATTTGTGGACCCATG  
GACAGTACAGACAAGCAGTGCAAAAGGCATAGACTACGATAAGCTCATTGTTGCGTTTGGAAAGTAGTAAATTGA  
CAAAGAGCTAATAAACCGAATAGAGAGAGCCACCGGCCAAAGACCACACCCTTCCTGCGCAGAGGCATCTTCTT  
CTCACACAGAGATATGAATCAGGTTCTTGATGCCTATGAAATAAGAAGCCATTTTATCTGTACACGGGCGGGG  
CCCCCTTCTGAAGCAATGCATGTAGGTACCTCATTCCATTTATTTTACAAAGTGGCTCCAGGATGTATTTAA  
CGTGCCCTTGGTTCATCCAGATGACGGATGACGAGAAGTATCTGTGGAAGGACCTGACCCTGGACCAGGCCTATAG  
CTATGCTGTGGAGAATGCCAAGGACATCATCGCCTGTGGCTTTGACATCAACAAGACTTTTCATATTCTCTGACCT  
GGACTACATGGGGATGAGCTCAGGTTTCTACAAAAATGTGGTGAAGATTCAAAGCATGTTACCTTCAACCAAGT  
GAAAGGCATTTTCGGCTTCACTGACAGCGACTGCATTGGGAAGATCAGTTTCTGCCATCCAGGCTGCTCCCTC  
CTTCAGCAACTCATTCCCACAGATCTTCCGAGACAGGACGGATATCCAGTGCCTTATCCCATGTGCCATTGACCA  
GGATCCTTACTTTAGAAATGACAAGGGACGTCGCCCCCAGGATCGGCTATCCTAAACCAGCCCTGCTGCACTCCAC  
CTTCTTCCCAGCCCTGCAGGGCGCCAGACCAAAATGAGTGCCAGCGACCCCACTCCTCCATCTTCTCACCAG  
CACGGCCAAGCAGATCAAAACCAAGGTCAATAAGCATGCGTTTTCTGGAGGGAGAGACACCATCGAGGAGCACAG  
GCAGTTTGGGGGCAACTGTGATGTGGACGTGTCTTTTATGTACCTGACCTTCTTCTCGAGGACGACGACAAGCT  
CGAGCAGATCAGGAAGGATTACACCAGCGGAGCCATGCTCACCGGTGAGCTCAAGAAGGCACTCATAGAGGTTCT  
GCAGCCCTTGATCGCAGAGCACACGGCCCGGCGCAAGGAGGTACCGGATGAGATAGTGAAGAGTTTCATGACTCC  
CCGGAAGCTGTCTTTCGACTTTTCAGTAGCACTCGTTTTACATATGCTTATAAAAGAAGTGATGTATCAGTAATGT  
ATCAATAATCCCAGCCAGTCAAAGCACCGCCACCTGTAGGCTTCTGTCTCATGGTAATTACTGGGCCTGGCCTC  
TGTAAGCCTGTGTATGTTATCAATACTGTTTCTTCTGTGAGTTCCATTATTTCTATCTTATGGGCAAAGCAT  
TGTGGGTAATTGGTGTGGCTAACATTGCATGGTCCGATAGAGAAGTCCAGCTGTGAGTCTCTCCCCAAAGCAGC  
CCCACAGTGGAGCCTTTGGCTGGAAGTCCATGGGCCACCTGTTCTTGTCCATGGAGGACTCCGAGGGTTCCAAG  
TATACTCTTAAGACCCACTCTGTTTAAAAATATATATTCTATGTATGCGTATATGGAATTGAAATGTCATTATG  
TAACCTAGAAAGTGCTTTGAAATATTGATGTGGGGAGGTTTATTGAGCACAAGATGTATTTAGCCCATGCCCCC  
TCCCAAAAAGAAATTGATAAGTAAAAGCTTCGTTATACATTTGACTAAGAAATCACCCAGCTTTAAAGCTGCTTT  
TAACAATGAAGATTGAACAGAGTTCAGCAATTTTGATTAAATTAAGACTTGGGGGTGAACTTTCCAGTTTACTG  
AACTCCAGACCATGCATGTAGTCCACTCCAGAAATCATGCTCGCTTCCCTTGGCACACCAGTGTCTCCTGCCAA  
ATGACCCTAGACCCTCTGTCTGCAGAGTCAGGGTGGCTTTTCCCTGACTGTGTCCGATGCCAAGGAGTCTGG  
CCTCCGAGATGCTTCATTTTACCCTTGGCTGCAGTGGAAAGTCAGCACAGAGCAGTGCCTGGCTGTGTCCCTG  
GACGGGTGGACTTAGCTAGGGAGAAAGTCGAGGCAGCAGCCCTCGAGGCCCTCACAGATGTCTAGGCAGGCCTCA  
TTTCATCACGCAGCATGTGCAGGCCTGGAAGAGCAAAGCCAAATCTCAGGGAAGTCTTGGTTGATGTATCTGGG  
TCTCCTCTGGAGCACTCTGCCCTCCTGTCAACCAGTAGAGTAAATAAACTTCCTTGGCTCCT

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**FIGURE 4087**

MPNSEPASLLELFNSIATQGELVRSCLKAGNASKDEIDSAVKMLVSLKMSYKAAAGEDYKADCPPGNPAPTSNHGP  
DATEAEEDFVDPWTVTQTSSAKGIDYDKLIVRFGSSKIDKELINRIERATGQRPHHFLRRGIFFSHRDMNQVLDAY  
ENKKPFYLYTGRGFSSEAMHVGHLPFFIFTKWLQDVFNVLVIQMTDDEKYLWKDLTLDQAYSAYAVENAKDIIAC  
GFDINKTFIFSDLDMGMSGFGYKNVVKIQKHVTFNQVKGIFGFTSDCIGKISFPQAIQAAPSFNSFPQIFRDR  
TDIQCLIPCAIDQDPYFRMTRDVAPRIGYPKPALLHSTFFPALQGAQTKMSASDPNSSIFLTD TAKQIKTKVKNH  
AFSGGRDTIEEHRQFGGNCDDVDSFMYLTFFLEDDDKLEQIRKDYTSGAMLTGELKKALIEVLQPLIAEHQARRK  
EVTDEIVKEFMTFRKLSFDFQ

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**FIGURE 4088**

GGCACGAGGGAGAGCGCAGCGCGCAGCCCGGTGCAGCCCTGGCTTTCCCCCTCGCTGCGCGCCCGCGCCCCCTTTC  
GCGTCCGCAACCAGAAGCCCAAGTGCAGCGCCAGGAGCCGACCCGCGCCCGCACCAGCTCCCGGGACCGCGACCCC  
GGCCGCCCAGAGATGACCGCGACCGAAGCCCTCCTGCGCGTCTCTTGTCTCTGCTGGCTTTTCGGCCACAGCACC  
TATGGGGCTGAATGCTTCCCGGCCTGCAACCCCCAAAATGGATTCTGCGAGGATGACAATGTTTGCAGGTGCCAG  
CCTGGCTGGCAGGGTCCCCCTTGTGACCAAGTGCAGTGCCTTCCCGGGTGCCTTACAGGACTCTGTGGAGAACCC  
GGGCAGTGCATTTGCACCGACGGCTGGGACGGGGAGCTCTGTGATAGAGATGTTTCGGGCCTGCTCCTCGGCCCCC  
TGTGCCAACAACGGGACCTGCGTGAGCCTGGACGATGGCCTCTATGAATGCTCCTGTGCCCCCGGGTACTCGGGA  
AAGGACTGCCAGAAAAAGGACGGGCCCTGTGTGATCAACGGCTCCCCCTGCCAGCACGGAGGCACCTGCGTGGAT  
GATGAGGGCCGGGCCTCCCATGCCTCCTGCCTGTGCCCCCTGGCTTCTCAGGCAATTTCTGCGAGATCGTGGCC  
AACAGCTGCACCCCCAACCCATGCGAGAACGACGGCGTCTGCACCTGACATCGGGGGCGACTTCCGCTGCCGGTGC  
CCAGCCGGCTTTCATCGACAAGACCTGCAGCCGCCCCGGTGACCAACTGCGCCAGCAGCCCGTGCCAGAACGGGGGC  
ACCTGCCTGCAGCACACCCAGGTGAGCTACGAGTGTCTGTGCAAGCCCGAGTTACAGGTCTCACCTGTGTCAAG  
AAGCGCGCGCTGAGCCCCCAGCAGGTACCCCGTCTGCCCCAACGGCTATGGGCTGGCCTACCGCCTGACCCCTGGG  
GTGCACGAGCTGCCGGTGCAGCAGCCGGAGCACCGCATCTGAAGGTGTCCATGAAAGAGCTCAACAAGAAAACC  
CCTCTCCTCACCGAGGGCCAGGCCATCTGCTTACCATCTTGGGCGTGTCTACCGCCTGGTGGTGTGGGCACT  
GTGGGTATCGTCTTCTCAACAAGTGCAGACCTGGGTGTCCAACCTGCGCTACAACCACATGCTGCGGAAGAAG  
AAGAACCTGCTGCTTCAGTACAACAGCGGGGAGGACCTGGCCGTCAACATCATCTTCCCCGAGAAGATCGACATG  
ACCACCTTCAGCAAGGAGGCCGGCGACGAGGAGATCTAAGCAGCGTTCACACAGCCCCCTCTAGATTCTTGGAGT  
TCCTCAGAGCTTACTATACGCGGTCTGTCTAATCTTTGTGGTGTTCGCTATCTCTTGTGTCAAATCTGGTGAAC  
GCTACGCTTACATATATTGTCTTTGTGCTGCTGTGTGACAAACGCAATGCAAAAACAATCCTCTTTCTCTCTTT  
AATGCATGATACAGAATAATAATAAGAATTTTCATCTTTAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4089**

MTATEALLRVLLLLLAFGHSTYGAECFPACNPQNGFCEDDNVCRCQPGWQGPLCDQCVTSPGCLHGLCGEPGQCI  
CTDGDWDELCDRDVRACSSAPCANNGTCVSLDDGLYECSCAPGYSGKDCQKKDGPCVINGSPCQHGGTCVDDEGR  
ASHASCLCPPGFSGNFCEIVANSCTPNPCENDGVCTDIGGDFRCRCPAGFIDKTCSRPVINCASSPCQNGGTCLQ  
HTQVSYECLCKPEFTGLTCVKKRALSPQQVTRLPNGYGLAYRLTPGVHELPVQQPEHRILKVSMKELNKKTPLLT  
EGQAICFTILGVLTSLVVLGTVGIVFLNKCETWVSNLRYNHMLRKKKNLLQYNSGEDLAVNIIFPEKIDMTTFS  
KEAGDEEI

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**FIGURE 4090A**

CTGGTTTCTTGCCCTTAAGGAGCCCATTGCCTTTCCCGCTGAAGTCTAGATGTTGACATGTAATAAAGCGGGCAGC  
AGGATGGTGGTGGATGCGGCCAACTCCAATGGGCCTTTCCAGCCCGTGGTCCTTCTCCATATTCGAGATGTTCCCT  
CCTGCTGATCAAGAGAAGCTTTTATCCAGAAGTTACGTCAGTGTTCGCTCCTCTTTGACTTTGTTTCTGATCCA  
CTAAGTGACCTAAAGTGGAAGGAAGTAAACGAGCTGCTTTAAGTGAAATGGTAGAATATATCACCCATAATCGG  
AATGTGATCACAGAGCCTATTTACCCAGAAGTAGTCCATATGTTTGCAGTTAACATGTTTTCGAACATTACCACCT  
TCCTCCAATCCTACGGGAGCGGAATTTGACCCGGAGGAAGATGAACCAACGTTAGAAGCAGCCTGGCCTCATCTA  
CAGCTTGTTTATGAATTTTTCTTAAGATTTTTAGAGTCTCCAGATTTCACCTAATATAGCGAAGAAATATATT  
GATCAGAAGTTTGATTGCAGCTTTTAGAGCTCTTTGACAGTGAAGATCCTCGGGAGAGAGATTTTCTTAAACC  
ACCCTTCACAGAATCTATGGGAAATTCCTAGGCTTGAGAGCTTACATCAGAAAACAGATAAATAATATATTTTAT  
AGGTTTATTTATGAAACAGAGCATCATAATGGCATAGCAGAGTTACTGGAAATATTGGGAAGTATAATTAATGGA  
TTTGCCCTTACCACTAAAGAAGAGCACAAGATTTTCTTATTGAAGGTGTTACTACCTTTGCACAAAGTGAAATCT  
CTGAGTGTCTACCATCCCCAGCTGGCATACTGTGTAGTGCAGTTTTTAGAAAAGGACAGCACCCCTCACGGAACCA  
GTGGTGTAGGCACTTCTCAAATACTGGCCAAAGACTCACAGTCCAAAAGAAGTAATGTTCTTAAACGAATTAGAA  
GAGATTTTAGATGTCAATTGAACCATCAGAATTTGTGAAGATCATGGAACCCCTCTTCGGGCAGTTGGCCAAATGT  
GTCTCCAGCCCACACTTCCAGGTGGCAGAGCGAGCTCTCTATTACTGGAATAATGAATACATCATGAGTTTAATC  
AGTGACAACGCGACGGAAGATTCTGCCCATCATGTTTCCTTCTTGTACCGCAACTCAAAGACCCATTGGAACAAG  
ACAATACATGGCTTGATATACAACGCCCTGAAGCTCTTCATGGAGATGAACCAAAAGCTATTTGATGACTGTACA  
CAACAGTTCAAAAGCAGAGAACTAAAGAGAAGCTAAAAATGAAAGAACGGGAAGAAGCATGGGTTAAATAGAA  
AATCTAGCCAAAAGCCAATCCCCAGTACACAGTGTATAGTCAAGCCAGCACCATGAGCATTCCGGTTGCAATGGAG  
ACAGATGGGCCTTTATTTGAAGATGTGCAGATGCTGAGAAAGACAGTGAAGGACGAGGCTCATCAGGCACAGAAA  
GATCCGAAGAAGGACCGTCTCTTGCACGCCGCAAGTCCGAGCTGCCTCAGGACCCCCACACCAAGAAAGCCTTG  
GAAGCTCACTGCAGGGCCGATGAGCTGGCCTCCCAGGACGGCCGCTAGCCTCCGGGGCGCCGCGTCCGGGGCCGGG  
CCCGCCAGTTCTTTTCCGGATTCTGTAGAAAATACATACTTCTGTGCCATACCAATCAGTTACACTCAAAGCTT  
TCTTGACCCCGTTCCGTAGGCAATAACGTGCGTCCGCCTCAGCGGAGATTAGGAGTTCAAACAATGGTGAAGCTT  
CCCAGAGCCCGCTGGCAGAGCCGCGGTTGACGACGGTGTCTCGCAGTGTGCGCCGCCACCCAGCGTAGTCCAA  
GTCAGACTATTTACAAAGTCAGAGCGATAGGAAAGCACCTGCCCTTCATCTTCATGTTCTCCCAATGGAAGT  
TAGGATCTTTTAACATAGGTGGTTCTGTGATAACATCAGTGTTCCTCAAATCAAAGGAACGCTTTAAAAATAGG  
ACCTATTTTAAAGACTTTACAGCCTTTGAAATGGTTTCCACGTGATTGTTACGCCAGCAGTTCTCGTTTGT  
GTTTTCAATCTCAGTGAAATGGCTCTTTGCTTTTCGAGTTCTCAGCAACGTAAGTGGGCAAATGACAATCCTCAG  
CCGCTGGTATTTTCAAGGGGTCTCTTCACTTTGATGAGTGACATGAACACCGTGTCTCCTTCTCTGTGTGTAC  
CTAAAGCCATATTTCCAAGTCTGTGGTACTCCAGGATTCCAGGAGTAAGCCTGTAGAAGAGATTTATTTTAAAG  
AGATTGCTCTGAAATTTATCTTAAAGAGCTTGCTCTGTCTACCTTGACAGAAATGGAGTTTAAATATATGTG  
TTAATATTTTATTTGCAGATTTCTGTTCCGTCAACTTAAACATTGTTGCCCTTCAACAAGGCTCTTGAATTAAT  
AAAATTATAGTCTCTAAGAATCCACATTTTATGGAAAGTTAGAGCAAAATCATTTGAGTTAAGCCAGTTCTTA  
GCCTAATGCAAACTGCAGCGCCTTTAAGCATAAAGTAACACAACAGCATTGCACGGGGCCGGCACTGCCGCTGCC  
TTCAGTGAAGGCTGCAGTGCTGTTCTGAGAGCTTGGAGGAGGCACCGAGGATGACGTTTAGTGGAGCTCTTT  
CTGTTGAAAAGAGCTCACGTTATCAACACCTTGTAAGGAAAATACAGTGTCTGAGTTTTCATCGGTCTTCACATG  
CTGCTATATATTCACAGAGTTCTTGCATGTACTGAGCTTTTGTGTTTAGATGGAATAGCACAAAGGAGAAAAATC  
TTTAACTTAGTGCTTTGTCTATTCTTTATTCTCTCAGGGTGGCCAGTATTTTGACTTATTTATCCTGCTTGAA  
AGCTACTTGAGATGTGTACTGCTATTCTAAACAGTGATCTAGTTTCTTTTATCTCTGGCATAAGATTATATAAC  
TTAATGTTAAGTGTCTTGAGGCATAAAAGACAAAATGTGGCTTATTTTAGGATCTGTTTTTTCATCGAGGTCTCG  
GGTATCCTTTCAAAGATAGTGAGAAGCAGACACTGCTCCTTGTGCAGCTCTGGTACCTCCTGCCCACTGCTGTCA  
CTTCAAGCCACTGGCAATGCTTCTGTCTCGTGTCTTGGAGGAAAATCACCTGGGGGGAGGGGACTTCTTGTGGT  
AAGAGCAAGTGCAGGTATGAAATGCGAAGATTGCCCCAGCTAAAAGTGGACAAGTCCGCTTTGTGAGATGAATAC  
TTCTTGAGAACTTGACAAGTATCTCTCCATTTTACCATTATGAAAATCATTAACAAAAACAGTTTAGATGC  
CTTCTCCTTTTGGAGGAAAAAGGGTGCTTTTATTGTATAAAGCAGCGTCTTATGTATTTTGATATACCATTGTT  
TGAACCTCCGCTTTTAGCTGATAGATTCTCAAATATCCTTGATTTTGGATGTTTCTGATGTTTGTGAGAGAGGTT  
TCTGGGAAGACTCTCTTTTGCCTCGGAAAAAGCAAAATATCAATGTTTGGGTGACTGTGTAAAGCTCAGTGT

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**FIGURE 4090B**

GTAAGAACATCTTTTTGTCTAGGTTTTCTTCTGCTCTTTATTGAAGACAAACACTCACCAAAAAGAAAAATAAA  
AGTTTTTCAGAGAACTAATTTTCTTTGGCAAGAGTATTACTTAATATTTTGGCCTCCTAAAGTTCCCTAGTTAG  
TACTCGGACTCCTGTGCTAATTGTCAGCTTACATATCATTGTATAGAGACTGTTTATTCTGTACCAAAGTATTT  
CAAAAGTACTACATTGAAAAATAAACCGGTGACTGTTTTCTTCATAAAGTCTGCGTTTGGCATCTTCACTCTTT  
CCAAAATGTATCTGTACATCAGAAATGTCACATTTCCAAGTGTCTTTTAGTGTGGCTTTAGTATGGCTTCCTTT  
TAATATTGTACATACATTGTATCTTTGTTTTATGGTAATAAGTAATAAAAAATGTAGACTTC

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**FIGURE 4091**

CTTTCCCGCTGAAGTCTAGATGTTGACATGTAATAAAGCGGGCAGCAGGATGGTGGTGGATGCGGCCAACTCCAA  
TGGGCCTTTCCAGCCCGTGGTCCTTCTCCATATTCGAGTTGAGGCTGTGAAGCTGGGCAGGGTTTCAGCTGAGCT  
GAGGTTGGAAGTCCCTGACCTTCAGCTGTGGCCGCCCTACGGAGCAGCAGGGAGAGCAAACCCATGGAGAACCCCG  
CGGCCCCCAAAGCATGGACGGAGCTGCCAGCCTTCTCCCTGCCCTTCTTCCTCTACTCCCGACCTGCCAGCCTT  
CTCCCTGCCCTTCTGCCCTCTACTCCCGACCTGCCAACCTTAGCCTAAAATCAGAGCTGCTAGAATCACACACAC  
TGTCGTAGCTGGTTTTGTATTGTAAATGAGTCATTCTGTTATTTGGAACTTATGTCTCATGCCAGGATCTGCA  
GATAGTTCTTTTCAAAATATTGTTTAGACAAAATAAATTTCTTTAAATATAATATCTCTACTTTAAATGCCTGG  
GGTGTTCATGCATTTTTCTAGGCTAGCAAAGCTTAAAGATTATTTCTATAATTCAGTTACATTTACCTTTATA  
GATGGGTACTCTAAGTAACAAATTAAACACACATGGATCTTCTAACTTTGGCTTTAAATCCTAAGAAGAGATAG  
GTAATATATAAAAGAGTATTAAAAAGAAATGGAGAGTAAAGGTATATGTCGGGCAGATGCAGTAGAAAAGCAAGG  
GTCATGACGTCAATGCTGGGCAAAGCTAAATTGTGAAGACAAAACAATAATGAAACAGGGTTATTCATCACGCTA  
AAGCGTACAGTCCATAGGATGATATAACTACCATGAATTTGGCCTAAATGATTGAACATTGAAACACATAAAGCG  
AGAACTGTAGGGGATT

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**FIGURE 4092**

CAGTTGCTTCAGCGTCCCGGTGTGGCTGTGCCGTTGGTCCTGTGCGGTCACTTAGCCAAGATGCCTGAGGAAACC  
CAGACCCAAGACCAACCGATGGAGGAGGAGGAGGTTGAGACGTTTCGCCTTTCAGGCAGAAATTGCCAGTTGATG  
TCATTGATCATCAATACTTTCTACTCGAACAAAGAGATCTTTCTGAGAGAGCTCATTTCAAATTCATCAGATGCA  
TTGGACAAAATCCGGTATGAAAGCTTGACAGATCCCAGTAAATTAGACTCTGGGAAAGAGCTGCATATTAACCTT  
ATACCGAACAAACAAGATCGAACTCTCACTATTGTGGATACTGGAATTGGAATGACCAAGGCTGACTTGATCAAT  
AACCTTGGTACTATCGCAAGTCTGGGACCAAAGCGTTCATGGAAGCTTTGCAGGCTGGTGCAGATATCTCTATG  
ATTGCCAGTTCCGGTGTGGTTTTTATTCTGCTTATTTGGTTGCTGAGAAAGTAACTGTGATCACCAAACATAAC  
GATGATGAGCAGTACGCTTGGGAGTCCCTCAGCAGGGGGATCATTACAGTGAGGACAGACACAGGTGAACCTATG  
GGTCGTGGAACAAAAGTTATCCTACACCTGAAAGAAGACCAAACCTGAGTACTTGGAGGAACGAAGAATAAAGGAG  
ATTGTGAAGAAACATTCTCAGTTTATTGGATATCCCATTACTCTTTTTGTGGAGAAGGAACGTGATAAAGAAGTA  
AGCGATGATGAGGCTGAAGAAAAGGAAGACAAAGAAGAAGAAAAGAAAAGAGAGAAAGAGTCGGAAGACAAA  
CCTGAAATTGAAGATGTGGTTCTGATGAGGAAGAAGAAAAGAAGGATGGTGACAAGAAGAAGAAGAAGATT  
AAGGAAAAGTACATCGATCAAGAAGAGCTCAACAAAACAAAGCCCATCTGGACCAGAAATCCCGACGATATTACT  
AATGAGGAGTACGGAGAATTCATATAAGAGCTTGACCAATGACTGGGAAGATCACTTGGCAGTGAAGCATTTCCTCA  
GTTGAAGGACAGTTGGAATTCAGAGCCCTTCTATTTGTCCCACGACGTGCTCCTTTTGATCTGTTGAAAACAGA  
AAGAAAAAGAACAACATCAAATTGTATGTACGCAGAGTTTTTCATCATGGATAACTGTGAGGAGCTAATCCCTGAA  
TATCTGAACCTTCATTAGAGGGGTGGTAGACTCGGAGGATCTCCCTCTAAACATATCCCGTGAGATGTTGCAACAA  
AGCAAAATTTTGAAAGTTATCAGGAAGAATTTGGTCAAAAAATGCTTAGAACTCTTTACTGAACCTGGCGGAAGAT  
AAAGAGAACTACAAGAAATTCATGAGCAGTTCTCTAAAAACATAAAGCTTGGAATACACGAAGACTCTCAAAAT  
CGGAAGAAGCTTTTCAGAGCTGTTAAGGTACTACACATCTGCCTCTGGTGATGAGATGGTTTTCTCTCAAGGACTAC  
TGCACCAGAATGAAGGAGAACCAGAAACATATCTATTATATCACAGGTGAGACCAAGGACCAGGTAGCTAACTCA  
GCCTTTGTGGAACGTCTTCGGAACATGGCTTAGAAGTGATCTATATGATTGAGCCCATTTGATGAGTACTGTGTC  
CAACAGCTGAAGGAATTTGAGGGGAAGACTTTAGTGTCACTACCAAAAGAAGGCCTGGAACCTCCAGAGGATGAA  
GAAGAGAAAAAGAAGCAGGAAGAGAAAAAAACAAAGTTTGAGAACCTCTGCAAAATCATGAAAGACATATTGGAG  
AAAAAAGTTGAAAAGGTGGTTGTGTCAAACCGATTGGTGACATCTCCATGCTGTATTGTGACAAAGCACATATGGC  
TGGACAGCAAAACATGGAGAGAATCATGAAAGCTCAAGCCCTAAGAGACAACCTCAACAATGGGTTACATGGCAGCA  
AAGAAACACCTGGAGATAAACCTTGACCATTCCATTATTGAGACCTTAAGGCAAAAGGCAGAGGCTGATAAGAAC  
GACAAGTCTGTGAAGGATCTGGTCATCTTGCTTTATGAACTGCGCTCCTGTCTTCTGGCTTCAGTCTGGAAGAT  
CCCCAGACACATGCTAACAGGATCTACAGGATGATCAAACTTGGTCTGGGTATTGATGAAGATGACCCTACTGCT  
GATGATACCAGTGCTGCTGTAAGTGAAGAAATGCCACCCCTTGAAGGAGATGACGACACATCACGCATGGAAGAA  
GTAGACTAA



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**FIGURE 4093**

MPEETQTQDQPMEEEEVETFAFQAEIAQLMSLIINTFYSNKEIFLRELISNSSDALDKIRYESLTDP SKLDSGKE  
LHINLIPNKQDRTLTIVDTGIGMTKADLINNLGTIAKSGTKAFMEALQAGADISMIGQFGVGFYSAYLVAEKVTV  
ITKHNDDEQYAWESSAGGSFTVRDTGEPMGRGTVILHLKEDQTEYLEERRIKEIVKKHSQFIGYPITLFVEKE  
RDKEVSDDEAEKEDKEEEEKEEKESEDKPEIEDVGSDEEEKKDGDKKKKKKIKEKYIDQEELNKTPIWTRN  
PDDITNEEYGEFYKSLTNDWEDHLAVKHFSVEGQLEFRALLFVPRRAPFDLFENRKKKNNIKLYVRRVFIMDNCE  
ELIPEYLNFI RGVVDS EDLPLNISREMLQQSKILKIRKNLVKKCLELFTELAEDKENYKKFYEQFSKNIKLGIH  
EDSQNRKKLSELLRYYTSASGDEMVS LKDYCTRMKENQKHIIYYITGETKDQVANS AFVERLRKHGLEVIYMIPI  
DEYCVQQLKEFEGKTLVSVTKEGLELPEDEEEKKKQEKKTKFENLCKIMKDILEKKVEKVVVSNRLVTSFCCIV  
TSTYGWTANMERIMKAQALRDNSTMGYMAAKKHLEINPDHSIIETLRQKAEADKNDKSVKDLVILLYETALLSSG  
FSLEDPQTHANRIYRMIKLGLGIDEDDPTADDTSAAVTEEMPPLEGDDDTSRMEEVD

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**FIGURE 4094**

GC GCGGTGGGCGTGATCCGGGCACTTAGGGCAGGATGAACGCTGCTTTCCAAGATGGCGACGGAGGGAGGAGGGA  
AGGAGATGAACGAGATTAAGACCCAATTACCACCCGGGAAGGTCTGTACAAGCTGCTGCCGCACTCGGAGTACA  
GCCGGCCCAACCGGGTGCCCTTCAACTCGCAGGGATCCAACCTGTCCGCGTCTCCTTCGTAAACCTCAACGACC  
AGTCTGGCAACGGCGACCGCCTCTGCTTCAATGTGGGCCGGGAGCTGTACTTCTATATCTACAAGGGGGTCCGCA  
AGGCTGCTGACTTGAGTAAACCAATAGATAAAAGGATATACAAAGGAACACAGCCTACTTGTGTCATGACTTCAACC  
ACCTAACAGCCACAGCAGAAAGTGTCTCTCTCCTAGTGGGCTTTTCCGCGAGGCCAAGTCCAGCTTATAGACCCAA  
TCAAAAAAGAACTAGCAAACTTTTTAATGAGGAAAGACTAATAGACAAGTCACGAGTTACCTGTGTCAAATGGG  
TTCCCGGTTTCGGAAGCCCTTTTCCCTAGTAGCCCACTCGAGTGGGAACATGTACTTATATAATGTGGAGCACACTT  
GTGGCACCACAGCCCCCACTACCAGCTTCTGAAGCAGGGAGAGAGCTTTGCCGTGCACACTTGCAAGAGCAAAAT  
CCACGAGGAACCTCTCCTTAAGTGGACGGTGGGCGAGGGGGCCCTCAACGAGTTTGCTTTCTCCCCAGATGGCA  
AGTTCTTAGCGTGCCTGAGCCAGGACGGGTTTCTGCGGGTGTTCAACTTTGACTCAGTGGAGCTGCACGGTACGA  
TGAAAAGCTACTTTGGGGGCTTGCTGTGTGTGTGCTGGAGCCCGGATGGCAAGTACATCGTGACAGGTGGGGAGG  
ACGACTTGGTGACAGTCTGGTCCTTTGTAGACTGCCGAGTAATAGCCAGAGGCCACGGGCACAAGTCTGGGTCA  
GTGTGTAGCGTTTGACCCCTTATACCACTAGTGTAGAAGAAGGTGACCCATATGGAGTTTAGTGGCAGCGATGAGG  
ACTTCCAAGACCTTCTTCATTTTGGCAGAGATCGAGCAAATAGTACACAGTCCAGGCTCTCCAAACGGAACCTTA  
CAGACAGCCGCCCGTAAGTGTACGTATCGGTTTGGTTCCGTGGGCCAGGACACACAGCTCTGTTTATGGGACC  
TTACAGAAGATATCCTTTTCCCTCACCAACCCCTCTCAAGAGCAAGGACACACAAATGTCAATGAATGCCACGA  
GTCCTCCTGCTGGAAGCAATGGGAACAGTGTTACAACACCCCGGGAACCTCTGTGCCGCTCCTCTGCCACGGTCCA  
ACAGCCTTCCACATTCAGCAGTCTCAAATGCTGGCAGCAAAAGCAGTGTCATGGACGGGGCCATTGCTTCTGGGG  
TCAGCAAATTTGCAACACTTTTACTACATGACCGGAAGGAGAGGCACCACGAGAAAGATCACAAGCGAAATCATA  
GCATGGGACACATTTCTAGCAAGAGCAGTGACAACTGAATCTAGTTACCAAAACCAAAACGGACCCTGCTAAAA  
CTCTGGGAACGCCCTGTGTCTCGAATGGAAGATGTTCCTTGTTAGAGCCGCTGATATGTAAAAAGATAGCAC  
ATGAGAGACTGACTGTACTAATATTTCTTGAAGACTGTATAGTCACTGCTTGTGTCAGGAGGGATTTATTTGCACAT  
GGGGAAGGCCTGGTAAAGTGGGCTCATTGTCTATCCCCAAGCCAGGCCAGTTCTCCAGGTGGAACCTGTAGTGTAGC  
GACCTCACTGCTGCGCGCACAGTCTCCCGGGACTTGGACTCGAGGGAGTGACGAGGAGGAGCTCCGAGCTGCGCC  
TGAGCCGTGCCAGCCGGCGGACCTCAGGCGGTGGACGTGGCGATAGCCGTGTGGACGGTGACCGGCTCACTCTG  
CGGCGCGTGCTCCCGCTGCTCACCCAAAGAAGTTGTTTCCATTTTAAACCGGTCTTTTGGGGCTGCAGTAAAAA  
ATAAGAAATGGAGTTTCTTGCTTTTACTCTAAAATTCATGTAAATTAATTTTATATATATATATATATATACA  
TATATACATAGTGTAATAATAAATGTTTCTTGACAAGAAATCCCTGAAATTCAGCTGTTATAGTGCTTCACTG  
TTTTTGCACTGATTTTCTATACCTTAGGTGGTCAGAAGACAACCTTGAATGCACTCATAGAGAAACTGTTACT  
TTCTGACGTAATGTAAATTCAGGAAGACAGACGCTGCAATCACAGATTTTAAAAAATTGTTTGCACTTAAAAATAG  
TTGAATGCTGGTGGAAAGTTACTTTGCAGATGGGTGTAAGGACTCATGGCCCTCTGAGGTGCGGCGTGAAGATGC  
CCTTTTTACCGTTGACGTTTATTTTACGTAAAATAAAGTGTGTTTCCAATGCAATCAACTCTGTATTATATGT  
ATAAATATTGTAATTCGCAATTGGGGAAAATAGTTACTTCACTAGTAATTTTCATCATTTAAGAGTGATATTTT  
TAATTCACAAAAGTTAATATTAAACTATCTTGAATAT

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**FIGURE 4095**

CGCATGCGCAGGCGACAGCTCATGGCGTTCAGGGCCTGACGGTTGCTAGGGTGACAGGGACACAACATGGCGGCG  
GGATCTCTAACGCTCTCCTTCGAGGGACCACCACGGAGATCCTAGTGCGGGACCCCGCCTCAGGGAAGTGGAAG  
CAGGGGGACAACCTTCCTGCTTCCTTCTTTCCGTCCAGTGTGCGCAAGGGGTTGTACCGGCTTCGCGATCCAA  
GATGAAGAACTATAAAGCAATTGGCAAAATAGGAGAGGGAACGTTTTCTGAAGTTATGAAGATGCAAAGCCTGAG  
AGATGGAAACTACTATGTCATGTAAACAAATGAAGCAGCGCTTTGAAAGTATTGAGCAAGTCAACAACCTACGAGA  
GATCCAAGCACTGAGGCGCCTGAATCCGCACCCAAACATTCTTATGTTGCATGAAGTGGTTTTTGACAGAAAATC  
TGGTTCTCTTGCACTAATATGTGAACCTATGGACATGAATATTTATGAGCTAATACGAGGGAGAAGATACCCATT  
ATCAGAAAAAAAATTATGCACTATATGTACCAGTTATGTAAAGTCCCTGGATCATATTCACAGAAAATGGAATATT  
TCACAGAGATGTAAAACCAGAAAATATACTAATAAAGCAGGATGTCCTGAAATTAGGGGACTTTGGCTCCTGCCG  
GAGTGTCTATTCCAAGCAGCCGTACACGGAATACATCTCCACCCGCTGGTACCGGGCCCCGGAGTGTCTCCTCAC  
TGATGGGTTCTACACGTACAAGATGGACCTGTGGAGCGCCGGCTGTGTGTTCTACGAGATCGCCAGTCTGCAGCC  
CCTCTTTCTGGAGTAAATGAAGTGGACCAAATCTCAAAAATCCACGATGTCATCGGCACACCCGCTCAGAAGAT  
CCTCACCAAGTTCAAACAGTCGAGAGCTATGAATTTTGATTTTCTTTTAAAAAGGGATCAGGAATACCTCTACT  
AACAACCAATTTGTCCCCACAATGCCTCTCCCTCCTGCACGCAATGGTGGCCTATGATCCCGATGAGAGAATCGC  
CGCCACCAGGCCCTGCAGCACCCCTACTTCCAAGAACAGAGGAAAACAGAGAAGCGGGCTCTGGGCAGCCACAG  
AAAAGCTGGCTTTCCGGAGCACCTGTGGCACCAGCAACCACTCAGTAACAGCTGCCAGATTCCAAGGAGGGCAG  
AAAGCAGAAACAGTCCCTAAAGCAAGAGGAGGACCGTCCCAAGAGACGAGGACCGGCCTATGTCATGGAAGTCC  
CAAATAAAGCTTTCCGGAGTGGTCAGACTGTCTGTTACTCCAGCCCCACGCTGCAGTCCGTGCTTGGATCTGG  
AACAAATGGAAGAGTGCCGGTGCTGAGACCCTTGAAGTGCATCCCTGCGAGCAAGAAGACAGATCCGCAGAAGGA  
CCTTAAGCCTGCCCCGAGCAGTGTGCTGCTGCCCACCATAGTGCAGGAAAGGCGGAAGATTAACTGAGCAGCACCGT  
CGTCTCGACTTCGGAGGCAACACCAAGCCCGACCGGGCCAGGCCTGGGTGATCTGCTGCTGAGACGCCACGGAGG  
GCTGGGGATGCGCCTGCGTCCGTTTCGCGCTGGCCGGGGCTCTGGGTGCTGCCCTGCGCCCTGCCGCACCCGCGG  
CCCGCGCAGCTGCCCTAGGATGTTCTGGGCTAATATACTTGTAACCACCACCGATTCTAGGGTTTTCTTTTATTTT  
CGTTAAGAATTTGGGGCAGGAAATACTTTGTAACCTTTGTATATGAATCAAAACAAACGAGCAGGCATTTCTGTGA  
TGTGTTGGGCGTGGTTGGAAGGTGGGTTCTGCGTGTCCCTTCCCAGCGCTGCTGGTCAGTCGTGGAGCGCCATCA  
TGCTTTACCAGTGACGCTGCTGACACCCTGACTTTTATTAAAGAATAAGCTGTCGTTAAAAAAAAAAAAAAAAAA  
AAAA

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**FIGURE 4096**

MKNYKAIGKIGEGTFSEVMKMQLRDGNYYACKQMKQRFESIEQVNNLREIQALRRNLNPHPNIMLHEVVFDKRS  
GSLALICELMDMNIYELIRGRRYPLSEKKIMHYMYQLCKSLDHIHRNGIFHRDVKPENILIKQDVLKLGDFGSCR  
SVYSKQPYTEYISTRWYRAPECLLTDGFYTYKMDLWSAGCVFYEIASLQPLFPGVNELDQISKIHDVIGTPAQKI  
LTKFKQSRAMNFDFFPKKSGIPLLTNLSPQCLSLHAMVAYDPDERIAAHQALQHPYFQEQRKTEKRALGSHR  
KAGFPEHPVAPEPLNSCQISKEGRKQKQSLKQEDRPKRRGPAYVMELPKLKLSGVVRLSSYSSPTLQSVLGSG  
TNGRVPVLRPLKCIPASKKTDPOKDLKPAPQQCRLPTIVRKGR

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**FIGURE 4097A**

CCCCCGGCGGAGCCAGCTGCTGCTCTTCGGTGTGGCCCCGGTGGCGGCCCCGTTGCCAGGGAACAGGCTCCCG  
GCAGCCCCCGGCGGCGGAGTCCATCCCGCCTCCTCCGGCCCCGGGCGGCGGAGTCCGGAGGGGCTGCCGCG  
GGAGCCCCCAGGTTTCCCTAGATGACAAATAAACATTCTTTTCTGCGTGAAGATAGTCTGTGGAAACCTTGGC  
CATGGCATCGATATCAGAGCCTGTTACATTACAGAGATTCTGCCCGTTGTACTATCTCCTCAATGCCATTCCGAC  
AAAGATCCAGAAGGGTTTCCGCTCTATCGTGGTCTATCTACGGCCCTCGACACCAACGGGGACTACATCGCGGT  
GGGCAGCAGCATCGGCATGCTCTATCTGTACTGCCGGCACCTCAACCAGATGAGGAAGTACAACCTTGAGGGGAA  
GACGGAATCTATCACTGTGGTGAAGCTGCTGAGCTGCTTTGATGACCTGGTGGCAGCAGGCACAGCCTCTGGCAG  
GGTTGCAGTTTTTCAACTTGTATCTTTCATTGCCAGGGAGAAATAAACAGCTTCGGAGATTTGATGTCACTGGTAT  
TCACAAAAATAGCATTACAGCTCTGGCTTGGAGCCCCAATGGAATGAAATTGTTCTCTGGAGATGACAAAGGCAA  
AATTGTTTATTCTTCTCTGGATCTAGACCAGGGGCTCTGTAACCTCCAGCTGGTGTGGAGGAGCCATCTTCCAT  
TGTGCAGCTGGATTATAGCCAGAAAGTGCTGCTGGTCTCTACTCTGCAAAGAAGTCTGCTCTTTTACTACTGAAGA  
AAAGTCTGTAAGGCAAATTGGAACACAACCAAGGAAAAGTACTGGGAAATTTGGTGTCTGTTTTATACCAGGACT  
CTGTAAGCAAAGTGATCTAACCTTGTATGCGTACGGCCCCGGGCTCCGGCTATGGAAGGCTGATGTCCACGGGAC  
TGTTCAAGCCACGTTTATCTTAAAGATGCTTTTGCCGGGGGAGTCAAGCCTTTGAACTGCACCCGCGTCTGGA  
ATCCCCAACAGTGGAAGTTGCAGCTTACCTGAGAGGCACCTGGGGCTTGTTCATGTTTCTTCAAGAAGGCTG  
GGTGTGAGTTGGAATGAATATAGTATCTATCTCCTAGACACAGTCAACCAGGCCACAGTTGCTGGTTTGAAGG  
ATCCGGTGATATTGTGTCTGTTTCGTGCACAGAAAATGAAATATTTTTCTTGAAGGAGATAGGAACATTATAAG  
AATTCAAGCAGGCCTGAAGGATTAACATCAACAGTGAGAGATGGTCTGGAGATGTCTGGATGCTCAGAGCGTGT  
CCACGTGCAGCAAGCGGAGAAGCTGCCAGGGGCCACAGTTTCTGAGACGAGGCTCAGAGGCTCTTCCATGGCCAG  
CTCCGTGGCCAGCGAGCCAAGGAGCAGGAGCAGCTCGCTCAACTCCACCGACAGCGGCTCCGGGCTCCTGCCCCC  
TGGGCTCCAGGCCACCCCTGAGCTGGGCAAGGGCAGCCAGCCCTGTCTACAGAGATTCAACGCCATCAGCTCAGA  
GGACTTTGACCAGGAGCTTGTCTGTAAGCCTATCAAAGTGAAGGAAGAAGAAGAAGAAGACAGAAGGTGG  
AAGCAGGAGCACCTGTACAGCTCCCTGGAATCGACACCCTGCTCCGAATTTCTGGGGACAGTCCCCAGTCTT  
GAACACAGACTTGCTGTGATGACCTCAAGTGTCTGGGACAGTAGCGTGGATCAGTTAAGTGCAGAGTCTCCAGA  
CCAGGAAAGCAGCTTCAATGGTGAAGTGAACGGTGTCCACAGGAAAATACTGACCCCGAAACGTTTAAATGTCT  
GGAGGTGTCTAGGATCAATGCCTGATTCTCTGGCTGAGGAAGATGACATTAGAACTGAAATGCCACACTGTACCA  
TGACATGGGCGGGAGCTGCTCAATGGAGCGAGGGAAGATGTGGGAGGCAGTGATGTACGGGACTCGGAGATGA  
GCCGTGTCTGATGATGACCAATAGCACACAGTTACCCCTTCCAAGAACAGGACAGCTCTCCTGGGGCGCA  
TGATGGGGAAGACATCCAACCCATTGGCCCCCAAAGCACTTTTTGTGAAGTCCCCCTCCTGAACTCACTCACTGT  
GCCTTCCAGCCTCAGCTGGGCCCCAAGTGTGAACAGTGGCTGCCTGGGACCAGAGCTGATGAAGGCAGCCCCGT  
GGAGCCAGCCAAGAGCAGGACATCCTAACAGCATGGAGGCTCTGGCCACCTCAGCACAAATCTCTGGCATGC  
TGTCATGATGATGACACAGGTCAGAAAGAAATACCCATTTCTGAACGTGTCTTGGGAGTGTGGGAGGACAGCT  
GACTCCGGTCTCTGCCTTGGCAGCCAGCACTCACAAGCCCTGGCTTGAGCAGCCTCCACGGGATCAGACATTGAC  
GTCCAGCGATGAGGAGGACATCTATGCCACGGGCTTCCCTTCTTATCTCAGAGACGAGTGTGACAGAGCTCGG  
ACCTAGTTGCTCCAGCAGGACCTGAGCCGGCTGGGTGCAGAGGACGCCGGGCTGCTCAAGCCAGATCAGTTTGC  
AGAAAGCTGGATGGGCTACTCGGGTCCCGGCTATGGCATCTCAGCTTGGTGGTCTCCGAGAAGTATATCTGGTG  
CCTGGACTACAAAGGCGGCTGTTCTGCAGCGCTTCCGGGCGCGGGCTGCGCTGGCAGAAGTTTGAAGATGC  
TGTCCAGCAGGTGGCAGTCTCGCCCTCAGGAGCCCTTCTGGAAGATTGAACAGAAATCTAACGGGCTTTTGC  
TTGTGGGAAAGTCACCATCAAGGGGAAGCGGCACTGGTACGAAGCCCTGCCCCAGGCAGTGTGTTGTGGCCCTGAG  
CGATGACACGGCTGATCATCAGGACAGTGGGACCTATACTTGACAGACAGGCTGAGCGTGGATCGCCCTTG  
TGCCAGAGCCGTAAAGGTGGACTGTCCCTACCCGCTGTCCAGATCACAGCCCGGAACAATGTGGTGTGGGCGCT  
GACAGAGCAGAGGGCCCTCCTGTACCGGGAGGGCGTGAGCAGCTTCTGTCCGGAAGGCGAGCAGTGGAAGTGTGA  
CATTGTACGCGAAAGGCAAGCTTTAGAACCCGTCTGCATAACGCTCGGGGATCAGCAGACTCTCTGGGCCCTGGA  
CATCCATGGGAACCTGTGGTTTCAAGTGGCATTATTTCCAAGAAGCCCCAAGGAGATGACGACCATTTGGTGGCA  
AGTGAGCATCACGACTATGTGGTGTGACAGTGCAGCTTATTTACAGCAGATAATCCATGCCACTCACTCGGT  
GGCCACAGCAGCCCAAGCCCCGTAGAAAAGGTGGCAGATAAGCTGCGCATGGCGTTTTTGGTCCAGCAGCTTCA  
GTGCCAGCCAAGCCTTCTCGGGTCAATAACAGCGGTGTCTGGATCTCCTCGGGCAAGAATGAATTCCACGTGCG  
TAAGGGAAGTCTCATAGGCACCTACTGGAATCATGTGGTTCCCCGTGGGACAGCTTCTGCTACAAAATGGGCCTT

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**FIGURE 4097B**

TGTGTTGGCTTCTGCAGCTCCACGAAGGAAGXXXXXXXXXXTGGCTGTGCCAGAGCAGCAAGGACCTGTGCAG  
CGTCAGCGCCCAGAGCGCACAGTCGCGGCCCTCCACGGTGCAGCTGCCTCCCGAAGCCGAGATGCGCGCCTATGC  
CGCTGCCAGGATGCGCTGTGGGCGCTGGACAGCCTCGGCCAGGTGTTTCATCAGGACGCTCTCCAAGAGCTGCCC  
CACGGGCATGCACTGGACCAGGCTGGACCTCTCCAGCTAGGAGCTGTAAATTGACAAGCTTGGCATGTGGAA  
TCAGCACATCTGGGCCTGTGATTCCAGGGGTGGAGTTTACTTCCGTGTAGGGACTCAGCCTCTCAATCCAGTCT  
CATGCTTCCAGCCTGGATAATGATTGAGCCACCTGTCCAGCCCCGCGGGGTGAGCTTGGTCAGCGTCCATTCCAG  
CCCCAACGACCAGATGCTGTGGGTGCTTGACAGCAGGTGGAACGTGCACGTGCGGACCGGGATCACCGAGGAGAT  
GCCTGTGGGGACCGCCTGGGAGCATGTGCCAGGGTTCAGGCCCTGCCAGCTGGCGCTGAGCACCAGGACCGTGTG  
GGCCCGCTGTCCAAACGGAGACCTCGCCCGGCGGTACGGCGTCACAGACAAGAACCCCGCGGGGACTACTGGAA  
GAAAATTCCCGGCAGCGTGTCTGTTTACAGTGAAGTGCCTGAGCTGTGGGCTGTGGGCCCCGCGGCTA  
CCTCCTCCAACGGCTGACAAAGACGTTTACGCCACTCGCACGGCACCCAGAAGAGCAGCCAGGCCGCCATGCCCA  
CCCTGAGGACCTGGAGGACGAGTGGGAGGTTCATCTGAAGGAGCCCTGGCCGAGTCACGCGGAGGGGCCGCGCTC  
TGTGGCGGGCAGAGGGGCTTACAGTGAAGTCCCTGGTGGACGCGCTGCCTCAACACTTGTCCAGACACCTCTGGC  
CAGGTTGGACCCGCACACTTACTTTTCATCTATGTTGGTTTCTGTCTCGTTCCAGAACCCACAGCCTCCACCCGTG  
GCTGGCGTGATTGCTGCAGCAGTGGCGCCTCCTAGCTCAGGACAGTGGCGACTGCCCGGCTGCATGCACTCCGAT  
TACCCACGTGCTGCCGTCTCGTCTCATCCACAGATAGCTCCAGCTTTTGTGGTGGGAGTGGTCTCCGAGGGCC  
TCCCAGAACCAAGGGTAGCCGGGCAGCTGGTTTGGCCAGGGCCTCCTTCCACATTAGTAGCCCCAGGGCCAGAT  
GGAGCCAAAGGTGAGCTCTCTGCAGCGCGGGATGTGCTCGGTGATGGCTTTGTCCCATCATAGGGGGGTGTCCCC  
CCAGAGACAAAGCTGCAGAGCACATTCCATGCCAGACGCTCTGGCCAGGAAGCTGAGGCCGGGCTTGAAGGAGA  
GCGCTGGCCATGCCAGGAGAGAACCCACGCACATGCACACCACAACACACACACCTCACCTCACACCACAGC  
ACACCTCACACACCACACCGCACTGCACCATACCTCACACATCTCACACACCACAGCACACCTCACACACA  
ACACACCACACCCACACCGCACTGCACCGCACCGCACCGCTACCTCGCCACATCTCACACACCACACCA  
CACCACACCTCACTGCCCACACACGGCGCAGGCTGCCCGCCTCCTGGAGAGCACACTTCAGCTGAAACAGTAAAG  
CCTGATGGGTGCAAATGGAACCTGGATGTGTGCACGTGTGTCCAGGTAGGGACGGCACAGGAGGGTGCATGGGG  
CGTGGGGGAGCTGAGCAAGGGTCGCTCACTTAGAAATGTCTTTGGAATGGTGTTTAACTAATGCTGCTGGCGGAC  
ATCCTAAACCAGATGCATCCTCAGAGGACGAGTCTACTAATTATTGCCTTTGTTGTGTATTACAAATCTGCAT  
AAAATACCTCATTTCAAATCAAATCTTACAAATTTAGAAGAGAGATATGTTTTCCGAAAACAGTGGAGCCCTTT  
GTTCTTCCCGGGTTTGTCTGAGCCTGCACTGTCTCGCTGCAGCCTCAGAGGGGCAGGCATCCCCGCACAGA  
CTTGACTGGCAGGGCGGTACGGGACCTGCGGGCTGGCTCCGAGTGGCAGCCCATGCCTTCTGCGGGGTATGGGT  
TGACACTTGACAGGTTGAAACAGTGCCTCTATGGACGGCTGCTGTGGCCCCCTCAGACAATGGGCAGTGGCCAC  
CCGCCCCACTGGCATCTGCGTGTGAGGGCTAGGCCGCCCTGCCACACATCCCGCCCCCTCCGGAGGCAGCTTCA  
GGACAGGACACCAGGCTGGCTGCTTTTTTAGCCTGCCCTGGCCCAGGCCAGTCCTTGGTGTGAGGGAGCCCC  
CAGGCCGCAGGTGGAGGGTGATAAAATATGTTCTCTGACAGGACCCAGCCAGCCACATAGGTGGAGGTTTTCCAT  
GTCCAAATGAGGTCAAGATGCCGAAATCCCAGATCTGACTTCACACTTCCCTTTTCTAGAACCTTTTGTAAAGT  
TGGTGGCAGCAGAGGCAGCCCCAGGCCGGGCTGCATCTCTGTGTCTGTTGTGCCTTGGCCGGCGCCTCACGGA  
TGGCAAAGCTCTCCTCACCCATGGGACTGTAGTGCAATTAACCCGCGCTCTAGGTGATGCTTTTAAAGTTGTAGC  
TTCGTGCTTTGTACAGTTTCTTTCTGGTTTTAATTTTTAGTTGTGCTTTGAGTCAGTGAATAAACTAGACTTT  
TTCC

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**FIGURE 4098A**

AGCTTGAGCGCGGCGGCGGCGTGTTCAGTCAGAGCGAGAACATTCCAGAGGTCGCCCAGCTCCGGCGCTGACGG  
GTGTGGACCGCGGACGTCGCTGGGACAGCCCCCTCCCGCTGCTCGGCGGCGGCATCTGGCCCCGGCGCTCCTCGC  
TGGCCTTCGCTCCGCTCCTCGGACTCGGACTCGGGTTTATATCGCGCCTCACTTCATCCCAGTCCCGGGCGAG  
CAGCGTTGGGTTTATGTCTTTATTGACGAAAACGAGCTGTTGCGCAGCCATTGGTACCTGTATTGGGGAACAT  
AGCATACAAGCAAGAAGCTTACAGCCTCAGTGGCGAAAATTTTTTCATGTCAAGAGACCGAGAACTCTTGACGTG  
TTTATGTATCCCTTCTTCTCCAGACAGAAGATACCAAAAAGTTGCAATCAAAGATCTTTCATCTTATTGATAA  
AGCCACTAATAAGCCAAAATGCTCTGTCAATGTCAACCGCAGCGTGTCAAGACAGTTCTATCGCTACAAGATGCCC  
CGTCTGATTGCCAAGGTTGAGGGCAAAGGCAATGGAATCAAGACAGTTATAGTCAACATGGTTGACGTTGCAAAG  
GCGCTTAATCGGCTCCAACGTATCCCACCAAATATTTGGTTGTGAGCTGGGAGCACAGACCCAGTTTGATGTT  
AAGAATGACCGTTACATTGTCAATGGATCTCATGAGGCGAATAAGCTGCAAGACATGTTGGATGGATTCAATAAA  
AAATTTGTTCTCTGTCTGAATGTGAGAATCCTGAAACAGATTTGCATGTCAATCCAAAGAAGCAAACAATAGGT  
AATTCTTGTAAGCCTGTGGCTATCGAGGCATGCTTGACACACATCATAAACTCTGCACATTCAATTCTCAAAAAC  
CCACCTGAGAATAGTGACAGTGGTACAGGAAAGAAAGAAAAGAAAAGAAAACAGAAAGGGCAAAGACAAGGAA  
AATGGCTCCGTATCCAGCAGTGAGACACCACCACCACCACCACCACCAAATGAAATTAATCCTCCTCCACATACA  
ATGGAAGAAGAGGAGGATGATGACTGGGGAGAAGATACAACCTGAGGAAGCTCAAAGGCGTCGAATGGATGAAATC  
AGTGACCATGCAAAAAGTTCTGACACTCAGTGATGATTTGGAAAGACAATTGAGGAGAGGGTCAATATCCTCTTT  
GATTTTGTTAAGAAAAAGAAAGAGGGTGTATTGATTCACTGACAAAGAAATCGTTGCTGAAGCAGAAAGA  
CTGGATGTAAAGCCATGGGCCCTCTTGTTCTAACTGAAGTTCTTTTAAATGAGAAGATTAGAGAACAGATTAAG  
AAATACAGGCGCCATTTTCTACGATTTTGTACACAACAACAAAAAGCCCAACGGTACCTTCTTCATGGTTTGGAG  
TGTGTGGTAGCAATGCATCAAGCTCAGCTTATCTCCAAGATTCCACATATCTTGAAGGAGATGTACGATGCAGAC  
CTTTTAGAAGAAGAGGTATCATCAGCTGGTCGGAAGGCGCTTAAGAAATATGTCTCCAAAGAACTTGCCAAA  
GAGATTCTGTCAAAGCAGAACCATTTATAAAATGGTTGAAGGAGGCAGAGGAAGAATCTTCTGGTGGCGAAGAA  
GAAGATGAAGATGAGAACATTGAGGTGGTGTATTGGAAGGCTGCCAGTGTAACGAAAGTTGAGACTGTAAGTCA  
GACAACAAGGATGACGACATCGATATTGATGCCATTTAAAGGGATGGATGCAACCTAGCTTAACAGTATAATGCT  
GCAATTTTCTCCATTATCAGCCAGAAGTGCAACATGTATGTGCAAAAGCTAAAATGGCTTAACATCATGCTAC  
ACTTTACACTAAAAATCTATTACTGTGAGTGGTCTGTTATTAAGCCCAATGAGACATCTAGGGAGTCCATACACA  
TCAGTGAGCAGATGTAGTTTGCTTATTTATAGCATGTTTCTTTTGAAAACTAGTGGTGGACACATTTGGATCA  
CATTTATACAGTTATAAAAAATAAAGGTTTGATTTTGGTCGTTCTTCAGATGTTTGGCTCTGAATGACTTAAGCTG  
AAGTAAGTGGCTCCTTACTTTAAATGTTCTGCCATCATTTACCTGATGAGCATTTCTGGAGCCTGCCAGATATT  
GTTAGGTCCTGGGGCTGCAAGAGGTCCTCAACAGGATGTAAAGCAAACCTTAATTGTAATTAATTTATTCAGCCC  
ATTAAGAAAGTACTAAAGTTTATCTCTGTAGTTCTCAAATTGGCATCTGGTAATGTACATTGTGAGGTAGACT  
GATAATGAAATGACAGTGCAACATCTTAACCAAGAAGTAAATATGACCTCAGTGTCTATAAATAATGTAAGAGC  
AGGATTGAAACTTGAGAGCTGTTTTCTCATTTTCATGTACACTTGCCCCAAATGTCTTTGAAGTCGTGTGCAT  
TGCAGGTTGGATGAGCCAGGGAAATTATTACATTAACAAGCATTTTGTGTGTGCGTAGTAGTTACTTTGTAAGTGA  
GAGAACTTGCTTTGGGGTGCAATTAAACAATAAACTGATTTTATTGGGAGAAACAAGGAAGGGTGCACTTAACCT  
AGCAACCTAAGCATGATTTTTCAGCTTTTGCCCTTAGGGTTTAAATTACAATTCAAAAATGTTAGACATACTGTA  
TTTTTTCGTTCAAGTGTTGGCTTTAATTTTCCCTCTTGACAGTTTGTCTGTAATGCCCTTTACATTGGACACATA  
GTTTATGCTTTTATGATTTTGGTTGCTTTCTTGCCAAAATAAGTGTTAACTGTGTTTCAAACCTTGATTTTCTTTC  
TTTTTCTTTTTTTTCTTCCAGAATGTCTTATTAAAAAGAAAGCTAAAAGCATACTTCTAAGTCAGAGCCTCT  
ATTTTGGTGTAAGACTTGCGATATTTTACTTCACATTGAATATAGCCAGGCACCCAAGAAGTCTGATGGCCAC  
CTGAGTGACAGGTGACAAGGACCTGACAGAGCCCATGCAGGGCTTTAGATTTGGACACACAAGAGTTGATAACTTC  
CTCATGAACCTCTTGCTGATCTAAACTCATATTATGGGTTCTGACTGTTTGAAGTAACTCGTCTTCAAGGTTAAAC  
CTCTTGGCAGTTACCTTTTCAAAAAGTGACAGTGGGAATCGAGAATCGATAGGGTTAATTTTGGAGCAGTGGC  
TTATACCATTCACCTCTGTTTTTGTGATTATTTACAGATAATGAGACCTTAATAACAAATAGGCGTAAAAAA  
ATTTTCACATTGAAATGATAGAAACATTTGATGTAATAAACTTGTTGGCTTGATATTTAAGGAATTGAAACC  
TAGCAATCTTATTGGAGAGACAAGAATTGGTCTCCAGCTGCCTTTGATCAAGATTGGGGTGAAGTGGAGCAGGA  
GCCATATACCTGGAGGGAATGTGCTTTGTACACCAAAGAGGATTTTTTTTTTCTTCAAACCTGTATGTTGCCTA  
GGTTTCAAATCTTTGCCGCAAGGCTGATCTGCTTTCATTAAGTGAATCTGTAGGAGATACTGGTGACCTAAG

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**FIGURE 4098B**

CTAAGTTGCACTCAGCATACTCAGTGTCAAGCTAATGAGGTTCTATTATAAAGGTTCTACTTTTAATCTGAGGGA  
AAACATGTTCAAGGCTTCTAGAACACTAAAAATTTGGCTTAAACCAGTGTTTCAGTCTGGTGCCAACTTCGAAT  
GGAATACAAATTCACATAATCTGAACTTTGTTTCACAGGTTATCCTAATAGAGTAATTCTTCACTTTGCTCTATTG  
AACTGTCTTAAGGATTTGTTTAAACAGCTAAGTTACTTGATTAAAATAATGATAAAATTGTAAAAAAAAAAAAA



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**FIGURE 4099**

MSVNVNRSVSDQFYRYKMPRLIAKVEGKGNGIKTVIVNMVDVAKALNRPTYP TKYFGCELGAQTQFDVKNDRI  
VNGSHEANKLQDMLDGF IKKFVLCPECENPETDLHVNPKKQTIGNSCKACGYRGMLDTHHKLC TFI LKNPPENS  
SGTGKKEKEKKNRKGKDKENG SVSSSETPPPPPPNEINPPPH TMEEEEDDDWGEDTTEEAQRRRMDEISDHAKV  
LTLSDDLERTIEERVN ILFDVFKKKKEEGVIDSSDKEIVAEAEERLDVKAMGPLVLTEVLFNEKIREQIKKYRRHF  
LRFCHNNKKAQRYLLHGLECVVAMHQAQLISKIPHILKEMYDADLLEEEV IISWSEKASKKYVSKELAKEIRVKA  
EPFIKWLKEAEEESSGGEEEDENIEVVYSKAASVPKVETVKSDNKDD DIDAI

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**FIGURE 4100**

GCCCGCCGCCGCCATGCCCTTCTCCAACAGCCACAACGCACTGAAGCTGCGCTTCCCGGCCGAGGACGAGTTCCC  
CGACCTGAGCGCCACACAACCACATGGCCAAGGTGCTGACCCCCGAGCTGTACGCGGAGCTGCGCGCCAAGAG  
CACGCCGAGCGGCTTCACGCTGGACGACGTATCCAGACAGGCGTGGACAACCCGGGCCACCCGTACATCATGAC  
CGTGGGCTGCGTGGCGGGCGACGAGGAGTCTACGAAGTGTTCAGGATCTCTTCGACCCCATCATCGAGGACCG  
GCACGGCGGCTACAAGCCAGCGATGAGCACAAGACCGACCTCAACCCCGACAACCTGCAGGGCGGCGACGACCT  
GGACCCCAACTACGTGCTGAGCTCGCGGGTGGCAGGGCGCGCAGCATCCGTGGCTTCTGCCTCCCCCGCACTG  
CAGCCGCGGGGAGCGCCGCGCCATCGAGAAGCTCGCGGTGGAAGCCCTGTCCAGCCTGGACGGCGACCTGGCGGG  
CCGATACTACGCGCTCAAGAGCATGACGGAGCGGAGCAGCAGCAGCTCATCGACGACCCTTCTCTTCGACAA  
GCCCCGTGTCGCCCCCTGTGCTGGCCTCGGGCATGGCCCCGCGACTGGCCCCGACGCCCGCGGTATCTGGCACAATGA  
CAATAAGACCTTCTGCTGGTGGGTCAACGAGGAGGACCCTGCGGGTCACTTCCATGCAGAAGGGGGGCAACAT  
GAAGGAGGTGTTACCCGCTTCTGCACCGGCTCACCCAGATTGAAACTCTCTTCAAGTCTAAGGACTATGAGTT  
CATGTGGAACCTCACCTGGGCTACATCTCACCTGCCCCATCCAACCTGGGCACCGGGCTGCGGGCAGGTGTGCA  
TATCAAGCTGCCCAACCTGGGCAAGCATGAGAAGTTCTCGAGGTGCTTAAGCGGCTGCGACTTCAGAAGCGAGG  
CACAGGCGGTGTGGACACGGCTGCGGTGGGCGGGTCTTCGACGTCTCCAACGCTGACCGCTGGGCTTCTCAGA  
GGTGGAGCTGGTGCAGATGGTGGTGGACGGAGTGAAGCTGCTCATCGAGATGGAGCAGCGGCTGGAGCAGGGCCA  
GGCCATCGACGACCTCATGCCTGCCAGAAATGAAGCCCGGCCACACCCGACACCAGCCCTGCTGCTTCCTAAC  
TTATTGCTGGGCAGTGCCCAACCATGCACCCCTGATGTTGCGCGTCTGGCGAGCCCTTAGCCTTGCTGTAGAGAC  
TTCCGTACCCCTTGGTAGAGTTTATTTTTTTGATGGCTAAGATACTGCTGATGCTGAAATAAACTAGGGTTTTGG  
CCTGC

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**FIGURE 4101**

AGGACGGCGGGAAGAGGAGTGCGGAACCCGCGGGAGGATGTGCACAGAGGGCCCAGGAGGAGCCCTCAGGAGCCGG  
ACTGCCGTTGGCCAAACCGAGTCCCCAGGGAGACACTTAAGGGAAATTAAGTGCAGAGTGCAAGAGATGCCTCAG  
TCAAGTCAGCCAAAAACACGCGGGTCATCCCCAAGCCCCAGAGAGTGACAGAGCCCCGATGACACGGACACCTCG  
GCTGCTGTCACTTCCCTGGTTTCGGGCTCCACAGGCTTTGAATTGAAGGCGAGTGCCTCAGAATTTGCATCCAT  
TGTCTGTCTTTCTGGGAAGTTATTCATCCTGGTGGCCAGCCACCACAAAATGGATTGGATCTACTGGACC  
TGAATCCCAGAATTATTGCTGCAATTAAGAAAGCCAACTGAAATCGGTAAAGGAGGTTTTACACTTTTCTGGAC  
CAGACTTGAAGAGACTGACCAACCTCTCCAGCCCCGAGGTCTGGCACTTGCTGAGAACGGCTCCTTACACTTGC  
GGGAAGCAGCATCCTTACAGCACTGCAGCTGCACAGCAGAAGGAGCGGTTCCCCACGCAGCACCAGCGCCTGA  
GCCTGGGCTGCCCCGGTGCTGGACGCGCTGCTCCGCGGTGGCCTGCCCTGGACGGCATCACTGAGCTGGCCGGAC  
GCAGCTCGGCAGGGAAGACCCAGCTGGCGCTGCAGCTCTGCCTGGCTGTGCAGTTCCCGCGGCAGCACGGAGGCC  
TGAGGGCTGGAGCCGTCTACATCTGCACGGAAGACGCTTCCCGCACAAAGCGCCTGCAGCAGCTCATGGCCAGC  
AGCCGCGGCTGCGCACTGACGTTCCAGGAGAGCTGCTTCAGAAGCTCCGATTGGCAGCCAGATCTTCATCGAGC  
ACGTGGCCGATGTGGACACCTTGTGGAGTGTGTGAATAAGAAGGTCCCCGTAAGTGTCTCGGGGCATGGCTC  
GCCTGGTGGTCACTCGACTCGGTGGCAGCCCCATTCCGCTGTGAATTTGACAGCCAGGCTCCGCCCCCAGGGCCA  
GGCATCTGCAGTCCCTGGGGGCCACGCTGCGTGAGCTGAGCAGTGCCTTCCAGAGCCCTGTGCTGTGCATCAACC  
AGGTGACAGAGGCCATGGAGGAGCAGGGCGCAGCACAGGGCCGCTGGGGTTCTGGGACGAACGTGTTTTCCCGAG  
CCCTTGGCATAACCTGGGCTAACCAGCTCCTGGTGAGACTGCTGGCTGACCGGCTCCGCGAGGAAGAGGCTGCC  
TCGGCTGCCAGCCCGGACCTGCGGGTGCTCTCTGCCCCCACCTGCCCCCTCCTCTGTTCCTACACGATCA  
GTGCCGAAGGGGTGCGAGGGACACCTGGGACCCAGTCCCACTGACAGGTGGCGGCTGCACAACAGCCCTGCCTG  
AGAAGCCCCGACACACGGGGCTCGGGCCTTTAAACGCGTCTGCCTGGGCCGTGGCACAGCTGGGAGCCTGGTTC  
AGACACAGCTCTTCCAGGGCAGCGGCTCCACTTTCTCATCCGAAGATGGTGGCCACAGACTGACCCCCATCTGAG  
CTGGGGGGATGTTCTGCCTCTCCCTGGGTCTGGGGACAGGCCCGCTTGTGGGTACCTGGTCCCCACTGTGAGC  
TGGCCCTTGGGGAGAGGTGATTCTCAGGGCTGGAGCCTGGGGTGTCTTACAGTGAATCCCTGGGAGCCGCTGCT  
TCTTCTCTCCATATGGAAGCCCAACTGGGGTTGCGTCTGAGGCCTGCCCCCTGGGCTGGGGCTCAGACCCCTC  
AGCCTTGGGACCGTGCCACGAGGGTCTTCCCTCCTGCACACAGGGCAGTCCCTTACTCCCCCACTCAGGCCA  
CAGTGGGGCTGCAGGCAGGCGGCTCCTCCTACCCACCTCTGGGTCTTGGCTCCCGGGGGCCCCACCTCGGCAC  
ACACTGTGCCCCACAAAATTCAGTGTGGTACAAGGTGGAGAAAGCATATCCACCAACCTCCAGTGTGAGGGTC  
CAGGAGAGCCTGGGGGTGGGGGACTGCCTTGTCTCTAGTAGTGTGGCCTGTGCCAGCACCACAGCCGGTCAGAG  
GAGCGCAGGCAGCGCAGGGCTGGCACGTGACAGGCTCGTCAGCCACCTGGGAACACAGTTCTGGGGCAAAGAGGAT  
CCGAGGTTGAGAGGAAGGAGGGTCCCGGTGTATCCTGGCCCTGGGGGTCTGGGCGTCCAGCTCAGCCCTGGCCTG  
GCTGGGTGGTATTCTGGTAGGGATATGGCAGGACTCCTGGCAGGGCCACCTGCAGGACCCTGTCTGCAGTCCCA  
CACTGTGCAGACCCAGTCCACACTGTGGCCAGGCCTTACATCTGGCTGGAAAGCAGAGCCTCCTGGGAACACAT  
CTGGCTGCACAGGCTGAAATATCCACCCAGCAGGCAGAGTGGCGTGGCCTCCCCATGGGCACAGTGGTGACCCCC  
TTGATTCCACCGTACAACCCCTCCACCCCCACTCAGTGCCTCCACATGCTGCCTGGCACAGACCAGGCCTTT  
GACAAATAAATGTTCAATGGATGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4102**

MDLDLDDLNPRIIAAIKKAKLSVKEVLHFSGPDLKRLTNLSSPEVWHLLRTASLHLRGSSILTALQLHQKQERF  
PTQHQRSLGCPVLDALLRGGLPLDGITELAGRSSAGKTQLALQLCLAVQFPRQHGGLEAGAVYICTEDAFPHKR  
LQQLMAQQPRLRTDVPGELLQKLRFSGQIFIEHVADVDTLLECVNKKVPVLLSRGMARLVVIDSVAAPFRCEFDS  
QASAPRARHLQSLGATLRELSSAFQSPVLCINQVTEAMEEQGAAHGPLGFWDERVSPALGITWANQLLVRLADR  
LREEEAALGCPARTLRVLSAPHLPPSSCSYTISAEGVRGTPGTQSH

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**FIGURE 4103A**

CAGGTGATCCTCTACGATCCCGCCGCCGGTCCCCAGGCAGCGCAGGCCCCCGGCGAGCCGCCACTGCTGCAGTT  
CCCAAGATGTTTGCCTTCGATGCCGTCTTCCCCAGGACTCCGAGCAGGCCGAAGTCTGCTCGGGGACCGTGGCC  
GACGTGCTCCAGTCGGTGGTTCAGTGGGGCTGATGGCTGCATTTTTTCTTTGGCCACATGAGCCTGGGCAAGTCG  
TACACCATGATCGGGAAGGACAGCTCACCCAGAGCCTGGGCATCGTGCCCTGCGCCATCTCTGGCTCTTCAGG  
CTCATCGAGGAGCGCAGGGAGAGGACGGGCACCCGCTTCTCCGTCCGGGTCTCAGCCGTGGAGGTGTGCGGGCGC  
GACCAGAGCCTGCGGGACCTGCTGGCCGAGGTGGCCCTGGCAGCCTCCAGGACACCCAGTCTCCGGGAGTGTAC  
CTGCGGGAGGACCCCGTGTGTGGGGCGAGCTCCAGAACCAAGCGAGCTGCGGGCACCCACGGCCGAGAAGGCG  
GCTTTCTACCTGGATGCGGCCCTGGCGGCCCGCAGCACCAGCCGAGCGGGCTGTGGCGAGGACGCCCGACGCAGC  
TCCCACATGTTGTTACGCTGCACGTTACCAGTACCGCATGGAGAAGTGCGGCCGGGGAGGAATGTCCGGAGGC  
CGCAGCCGCTGCACCTCATCGACCTGGGCAGCTGTGAGGCGGCGGTGGCAGGGCCGGGGAGGCTGCTGGGGGT  
CCCTGTGTCTGTCCCTGTGCGCCCTGGGCAGCGTCTTGGCCCTGGTCAACGGAGCCAAGCATGTGCCGTAT  
CGGGACCACAGGCTCACCATGCTGCTGCGTGAATCCCTGGCCACCGCTGGCTGCCGCACCAACCATGATCGCCAC  
GTGTGCGGATGCGCCAGCCAGCAGCAGAGACACTCAGCACCCTGTCAGCTCGCCGCCCGCATCCACCGCCTGCGC  
AGGAAGAAGGCCAAGTACGCTCCAGCTCCTCTGGCGGGGAGAGCTCCTGTGAGGAAGGCCGGGCCCGTTCGGCC  
CCGACCTGCGGCCCTTCCACCCACGCACTGTGGCCCTGGACCCCGACCGCACGCCTCCCTGCCTGCCCGGTGAC  
CCCGATTACTCTCCAGCAGCGAGCAGTCTGTGACACGGTTCATCTACGTGGGGCCCGGTGGGGCGGCGCTGTCA  
GACCGGGAGCTCACCAGACAACGAAGGTCCGCTGACTTCGTGCCCATCATCCCTGCCCTGAGCCGCCACCGGCC  
TCCAAGGGTCCCCGAGACGCAGACCACTTCCGCTGCAGCACCTTCGCGGAGCTGCAGGAGCGGCTGGAATGCATG  
GACGGCAACGAGGGTCCCTCAGGAGGTCCAGGTGGCACCGACGGAGCTCAGGCCAGCCCGCCGAGGGGGCCGG  
AAGCCCTCGCCACCAGAGGCTGCATCCCCAGGAAGGCTGTGGGCACCCCGATGGCTGCCAGCACCCCTCGAGGC  
AGTTCTGGTCCAGACACCCACCAGGGTACCCCTGAGCCCTGCAAGGCCATTGTCTGGGGTGACCAGAGAGAGGAC  
AGCAGCGCTTGGCTGAGCTGCTGGTCCCGAAAAGGCTGCAGTGAGTGGAGGCAGGAGGCCACTGCCAGCCCG  
GCTCCCCACCTCCTCAGTTGCTGGAAGCCTGCAGAGCCCCAGAAGAGCCTGGGGGAGGGGGCACTGATGGAGTG  
GCACGGACCCCTCCCGTGGGCATGAGTGGGCAGGTGGCTGGGTCCCGATGCTTCTGGGGCCACCTGCCCCCGC  
CTGGCTGCTGGCAGTCGCTGTCCGGAGCGGGGCTGCTCACCACCACAGTGACCTGTCAGCGGCCAGTGGAGCTC  
AACGGCGAGGACGAGCTGGTGTTCACGGTGGTGGAGGAGCTGTCCCTGGGGGCGCTTGCCGGAGCTGGGCGGCC  
ACCAGCCTGGCTAGCTTCGACAGTGAAGTCTCCCTGCGGGCCCTGGCTCGGGGTCCCGGCCGCTCAGCATCATC  
AGCAGCATCAATGATGAGTTTGACGCCTACACCTCTCAGGCCCTGAGGGGGGGCCCTGGAGGGGGCAGCCTGG  
GCCGGCAGCAGTCACGGCTCCTCCATCAGCTCCTGGCTCAGCGAGGTGACGCTGTGACTGCCGACAGCCGTGAC  
CCCACGCCGACGCCCGCTTACGCCCCGACTCGCTGGCAGGGCTTGACCCTGGGGGGCCCCCTGCCCTGGATGGT  
TCCCTGGGGGATGGAAGCTCTGGGTCTGGGGCCAGACAGACCTGACAGTCTGGGCCAACCTGGGGTCCGTGC  
CCTGGGGAAAGTGGCTGCAGTGGCCCCATCCCGACCCGGCAGGGAGCCCCAGGCCGGGCCCTCGCGTGGGCATCC  
GCAGCCCAGACCATCCACTCCAGCCTCCCCGAAACCGAGGACTGCCTCTGCCACCACCCGTGTGGCTGTGCT  
CGCCTGGGCCAGAGCCCACCTGGCCGTGGAGGCCTGTTTGAGGACCATGGCTGCTCCGGGTAGGGGAGTGTGAT  
ACCCAGGCAGCTTCTGCTGGCAGGGCCCCAGCCCCACACTTGGCTCCCCCGGCTGCCCTGAGGCCAGGTGATG  
CTAGCCTGTGCCAGAGAGTGGTGGACGGGTGTGAGGTGGCAGCCAGGGCGGCCCGCAGGCCAGAGGCTGTGGCT  
CGGATCCCACCGCTGCGGAGGGGTGCCACCACGCTGGGTGTGACAACGCCAGCTGTGTCTGGGAGATGCTCCC  
ACGGAGGTGGTGGCTGCTCGGGGAGCCTGAAGGCCTCCCCACCAGCAAGAAGGTCTGGCTCCAAGGCGGGC  
TTCTTCCGAGGCCAGTGGGGCGCCCCCGGCCCCACCCACGCGGAAGTCCAGCCTGGAGCAGAGGAGCAGC  
CCGGCCTCGGCCCTCCGCATGCTGTGAACCGGCGCGGGTTCGGGGCTGCTGTCTCTTCGAGGGGAGGAGGAG  
CCCAGACCCAGCAGCCGGGCTGACCACTCTGTCCCCAGGGCCACGTCCAGCCTGAAGGCCCGGGCCAGCAAGGTA  
GAAGCGGCACACCGTCTCGCCGGACACGCGTCTTGGAGCGGTACGAAGGCCTGGCGCACAGCAGCAGCAAGGGC  
CGGGAAGCCCTTGGCGGCCCTCCCCGGGCTGTACCAAGCTGGGTGTGCCACCCTCCAGCCCCACACAGGTCCA  
GCTCCCGCTGTAGGAGCGGCGCAGCCAAGGCTGTGGGGCCCCCAAGCCCCCTGTTGGTGGAGGCAAGGCCGT  
GGCTAGTGGCTGGTGGGCTCGCGGGCTCTGGGGCTTCGGTGAAGTGTCTACGGCTCTGTGACGGGCGAGGAGC  
CCTGGCGGGCTGTGGCAGGTCCAGAGCAGCCCCAGGGCGGGGCCAGTGTGGGGCGAAGGCTGGCCGGGGT  
ACCGTCATGGGCACAAAGCAGGCGCTCCGGGCTGCTCACAGCCGCTCCATGAGCTGTACGCCAGTGGAGCCCCG  
GGCCGGGGTGGCTCCTCGTGGGGCTCGGCGGACTCAGACAGCGGCCATGACAGCGGCTGAACGTGGGGGAGGAG

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**FIGURE 4103B**

CGGCCACCCACGGGCCCCGGCCCTGCCCTCCCCCTACAGCAAGGTGACCGCCCCACGGCGGCCCCAGCGCTACAGC  
AGCGGCCATGGCAGCGACAACAGCAGCGTGCTGAGTGGAGAGCTGCCGCCCGCCATGGGCCGCACCGCCCTTTTC  
CACCACAGCGGTGGCAGCAGCGGCTATGAGAGCCTGCGGCGCGACAGCGAGGCCACCGGCAGCGCCTCCTCCGCC  
CCTGACTCCATGAGCGAGAGTGGGGCTGCCTCCCCAGGCGCCCGCACCCGCAGCCTCAAGTCCCCCAAGAAGAGG  
GCCACAGGTCTGCAGCGGCGGCGCTGATTCCCCGCCCCACTGCCCGACACCACTGCCCTGGGCGCTAAGCCAGC  
CTCCCCGGGCAGTGGGTGGACCTGCCCCCGCCCTGGCTGGCTCCCTGAAGGAGCCGTTGAGATCAAGGTGTAC  
GAGATCGATGACGTGGAGCGCCTTCAGCGGCCCCGCCCCACCCCGAGGGAGGCCCCACCCAGGGTCTGGCGTGC  
GTCAGTACAAGGCTGCGGCTGGCGGAGCGCAGGCAGCAGCGGCTGCGGGAGGTGCAGGCCAAGCACAAAGCACCTG  
TGTGAGGAGCTGGCCGAGACCCAGGGCCGGCTGATGCTGGAGCCTGGCCGCTGGCTGGAGCAGTTTGAGGTGGAC  
CCGGAGCTGGAGCCCGAGTCGGCCGAGTACCTGGCGGCCCTGGAGCGAGCCACGGCGGCCCTGGAGCAGTGCCTG  
AACCTGTGCAAGGCGCACGTTCATGATGGTCACCTGCTTCGACATCAGCGTTGCAGCCAGTGTCTGCCATCCCGGGG  
CCGAGGAGGTGGACGTCTGAGGCTGGGCGCCGACAAGAGGAGGGGGCGTGCAGCGGCTGGAGGACGGGACGT  
GGGACGGAGCGAGGATGTGGTGGGGGCTGCGGGGGAGGATGCGGAGGGGTTTCTGTGCAGGACGGGAGTCTCAG  
AGAGGAGACGGAGTGTGGGGGAGGGAGGGCCGGCCACGCGGTGGACAGAGCGAGGGTGCCAGGGTGACCCGAAGA  
CCGTCACCACCCGACAGCAACGCAAGTGCCTTTGACCTTGATTTGGACTTTTCTCCCTTTTGCAATTTGGTGCTAC  
AGACTTGAGACACCAGCAGAAGTTGTGTTACGCCGGCCCCGCTGCGCCTGTCCGGGCCGGGGCTGGCGCCGGTT  
GTGTTTGTGTCCACCTTGCCCTTCTTTGCAGCCAAGCAGTTTTTGTGGAGTGGGACTTACCTGCACGCCCCAGGGG  
TCTTTCAGGATTCAGGATGACTTTTCTTTTACAAATGGTTTTCTCTCGGCAGAGCCCGGGTTGTGGGGGATCTGTG  
TGGGTTCTCAACGCAGATCCATCCTGGGGTCTCCCGGGCAGGGATGGCTGACCTCGAGTCCCCTCCCTTCCCGAG  
AACCTGCTCTGTCCCGAGGGCAGCTAACAAAGGGCTGAGCCCCAGGTACAGGTTGCCTCCTCCACGGCAGGAATTT  
TTACCAAAACCACAAGCAAAAAACAAAACAGACCACACGACCAACAACAAAGATGGGGGGTAGGGTTTGTAAA  
GGTTCTGTAGGTTTCATATTTTATATCATTTTGCCATAAATGCGGAATTTGCCGTGGGAATTTGAAGACAAAT  
GATCTATGTTTTTATGGTTTTCTAGGGAAGGTGTTCTGGGGGCGGGCTCTCTCCAGCTGTGGGAGGCCTGCTCC  
CTCTGGGGGGCACCTGGGCAGGGTGGGGGGGCTTGGGAGGCGCTTCTTGCCAAATGCAGACGAGGGGTGAGCC  
TGCCAGCGTTTGCGACGTCCCCGCACGACAGGCTCATACTTCTGAGGATCGTGCATAGCATAGGACGTCTGAAC  
CTTTGTACAAATGTGTAGATGACATCTTGCTACAGCTTTTATTTGTGAATTAAAGATGCATTGATGGTT

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**FIGURE 4104**

MHLLQAPASHEDLDAPHGGPSLAPPSTTTSSRDTPGPAGPAGRQPGRAGPDRTKGLAWSPGPSVQVSVAPAGLGG  
ALSTVTIQAQQCLEGMWSVSRVNSFLPPACLAEEAAVAVAVADTVREC PPVAGPDGLSKAWGRGGVCTSALVTPT  
PGSVGGSTGFSAAASFFIRAMQKLSLASKRKKPHPPPPATRGSTSTYPTDFSGVLQLWPPPAPPCLLRAASKTKD  
NPGSIGKVKVMLRIWPAQGAQRS AEAMSF LKVDPRKKQVILYDPAAGPPGSAGPRAATAAVPKMFAFDVFPQD  
SEQAEVCSGTVADVLQSVVSGADGCIFSFGHMSLGKSYTMIGKDSSPQSLGIVPCAISWLFRLIEERRERTGTRF  
SVRVSAVEVCGRDQSLRDLLAEVAPGSLQDTQSPGVYLRDPVCGAQLQNQSELRAPTAEKAAFYLDAAALAAST  
SRAGCGEDARRSSHMLFTLHVYQYRMEKCGRGGMSGGRSLHLIDLGSCEAAAGRAGEAAGGPLCLSLSALGSVI  
LALVNGAKHVPIYRDHRLTMLLRESLATAGCRTMIAHVSDAPAQHAETLSTVQLAARIHRLRRKKAKYASSSSGG  
ESSCEEGRARRPPHLRPFHPRTVALDPDRTPPCLPGDPDYSSSEQSCDTVIYVGP GGAALSDRELTDNEGPPDF  
VPIIPALSRHRPSKGP RDADHFR CSTFAELQERLECMDGNEGPGGGPGGTDGAQASPARGGRRKPSPEAASPRKA  
VGTPMAASTPRGSSGPDTHQGTPEPCKAIVWGDQREDSSAWPELLVPEKAAVSGGRRPLPSPAPPPPQLLEACRA  
PEEPGGGGTDGVARTPPVGMSSQVAGSPMLPGATCPRLAAGSRCPERGLTTTVTLQRPVELNGEDELVFTVVEE  
LSLGALAGAGRPTSLASFSDCSLRALASGSRPVSIISSINDEFDAYTSQAPEGGPLEGA AWAGSSHGSSISSWL  
SEVSVCTADSRDPTPQPRFSPDSLGLDPPGPPALDGS LGDSSGFLGPD RPDSPGPTWGPCPGEVA AVAPSRPG  
REPQAGPSRWASAAQTIHSSLPRKPRTASATTRVGCARLGQSPPGRGGLFEDPWLLRVGECDTQAASAGRAPSPT  
LGSPRLPEAQVMLACAQRVVDGCEVAARAARRPEAVARIPPLRRGATTLGVTTPAVSWGDAPTEVVACSGSLKAS  
PTSKKGLAPKAGFLPRPSGAAPPAPPTRKSSLEQRSSPASAPPHAVNPARVGAAAVLRGEEEP RPSSRADHSVPR  
ATSSSLKARASKVEAAHRLAGHASLERYEGLAHSSSKGREAPGRPPRAVPKLGVPSSP THGPAPACRSGAAKAVG  
APKPPVGGGKGRGLVAGGSRALGPSVKLSTASVTGRSPGGPVAGPRAAPRAGPSVGAKAGRGTVMG TKQALRAAH  
SRVHEL SASGAPGRGSSWGSADSDSGHDSGVNVGEERPTGPALPSPYSKVTAPRRPQRYSSGHGSDNSSVL SG  
ELPPAMGRTALFHHSGGSSGYESLRDSEATGSASSAPDSMESGAASPGARTSLKSPKKRATGLQRRRLIPAP  
LPD TTALGRKPSLPGQWVDLPPPLAGSLKEPFEIKVYEIDDVERLQRP RPTPREAPTQGLACVSTRRLAERROQ  
RLREVQAKHKHLCEELAETQGRMLLEPGRWLEQFEVDPELEPESA EYLAALERATAALEQCVNLCKAHVMMVT CF  
DISVAASAAIPGPQEVDV

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**FIGURE 4105**

CACTACTGCCCTGCACCTGCAGCCCCCGTGGCGGGAGGCATGGAGGAGGTCATCGTGGCCCAGGTGGACCATG  
GCTTGGGCTCAGCATGGGTCCCCAGCCATCGGCGGGTGAACCCACCCACACTGCGCATGAAGAAGCTGAACTGGC  
AGAAGCTGCCATCCAACGTGGCAGCTGAGCACAACCTCTATGTGGGCGTCCCTGAGCAGCCCCGACGCCGAGGCTG  
TGGAGCCCCGACTTCTCCAGCATCGAGCGACTATTCTCCTTCCCTGCAGCCAAGCCCAAGGAGCCCCACCATGGTGG  
CCCCCGGGGCCAGGAAGGAGCCCAAGGAGATCACTTTCCTCGATGCCAAGAAGAGCCTGAACCTCAACATCTTCC  
TGAAGCAATTTAAGTGCTCCAACGAGGAGGTGCGTGCTATGATCCGGGCTGGAGATACCACCAAGTTTGATGTGG  
AGGTTCTCAAACAACCTCCTTAAGCTCCTTCCCGAGAAGCAGCAGATTGAAAACCTGCGGGCATTACAGAGGAGC  
GAGCCAAGCTGGCCAGCGCCGACCACTTCTACCTCCTCTGCTGGCCATTCCCTGCTACCAGCTGCGAATCGAGT  
GCATGCTGCTGTGTGAGGGCGCGCCGCCGTGCTGGACATGGTGCGCCCAAGGCCAGCTGGTGCTGGCTGCCT  
GCGAAAGCCTGCTACCAGCGCCAGCTGCCCATTCTTCTGCCAGCTGATCCTGAGAATTGGGAACCTCTCAACT  
ACGGCAGCCACACCGGTGACGCCGACGGCTTCAAGATCAGCACATTGCTGAAGCTCACGGAGACCAAGTCCCAGC  
AGAACCGCGTGACGCTGCTGCACCACGTGCTGGAGGAAGCGGAAAAGAGCCACCCCGACCTCCTGCAGCTGCCCC  
GGGACCTGGAACAGCCCTCGCAAGCAGCAGGGATCAACCTGGAGATCATCCGCTCAGAGGCCAGCTCCAACCTGA  
AGAAGCTTCTGGAGACCGAGCGGAAGGTGTCTGCCCTCCGTGGCCGAGGTCCAGGAGCAGTACACCGAGCGCCTCC  
AGGCCAGCATCTCGGCCCTTCCGGGCACTGGATGAGCTGTTTGGAGCCATCGAGCAGAAGCAACGGGAGCTGGCCG  
ACTACCTGTGTGAGGACGCCAGCAGCTGTCCCTGGAGGACACGTTTACGACCATGAAGGCTTTCCGGGACCTTT  
TCCTCCGCGCCCTGAAGGAGAAACAAGGACCGGAAGGAGCAGGCGGCGAAGGCAGAGAGGAGGAAGCAGCAGCTGG  
CGGAGGAGGAGGCGCGGCGGCCCTCGGGGAGAGGACGGGAAGCCTGTGAGGAAGGGGCCCCGGGAAGCAGGAGGAGG  
TGTGTGTATCATGATGCCCTGCTGGCTGACATCAGGAAGGGCTTCCAGCTGCGGAAGACAGCCCCGGGGCCGCGGGG  
ACACCGACGGGGGCGAGCAAGGCAGCCTCCATGGATCCCCAAGAGCCACAGAGCCTGTGGCCACCAGTAACCCCTG  
CAGGAGATCCCGTGGGCAGCACGCGCTGTCCCGCCTCTGAGCCCGGCTTGATGCTACAACAGCCAGCGAGTCCC  
GGGGCTGGGACCTTGTAGACGCGGTGACCCCCGGCCCTCAGCCACCCCTGGAGCAGTTGGAGGAGGGTGGTCCAC  
GGCCCCCTGGAGAGGCGTTTCTTCTGGTATGTGGATGCCAGCGATGTCTTAACCACTGAGGATCCCCAGTGCCCCC  
AGCCCTTGGAGGGGGCTGGCCGGTGACTCTGGGAGATGCTCAGGCCCTGAAGCCCCCTCAAGTTCTCCAGCAACC  
AGCCCCCTGCAGCCGGAAGTTCAAGGCAAGATGCCAAGGATCCACGTCCTTGCTGGGCGTCTCCAGGCCGAGG  
CCGACAGCACAAAGTGAGGGGCTGGAGGACGCTGTCCACAGCCGTGGTGCCAGACCCCTGCAGCAGGCCAGGTG  
GGGATGAGGACGAGGACGAGGAGGACACGGCCCCAGAGTCCGCACTGGACACATCCCTGGACAAGTCCTTCTCCG  
AGGATGCGGTGACCGACTCCTCGGGTTCGGGCACACTCCCCAGGGCCCCGGGGCCGGGCTCAAAGGGGACCGGGA  
AGCGAAGGAAGAAGCGTCCCTCCAGGAGCCAGGAAGGCTCAGGCCAGGCCCAAGGCCAAGTGAGAGAGCCAG  
GCCACAGGACATGCTGCCATTCTGCCAAGAGAGGCTCTTCTGGGGGCCAGGCTGGGACTGGGCCCCGGAAACCAA  
AACTCCGTGCCCTTACCCAGCCGGGGCCCTCCTGGAGCCTTCTTGGGGTGTGTGGCTGGGAACCCGACAGGCACC  
AGTGCCCTGCCAGGCCTGGTGCCCTCCTGGACCGCTGCACGTGCCAGCCTCCACCTGCTTCTAAAGGCAACC  
CTGGCCACACCCGATGCGCCCGGTGCAGCCTGCCAAGGGCCAGTCGGGGGGTGTGCGTCTCTGCCAGTGTCCA  
CCACAGCTCTGCTGCCCTTACGCCAGCAAGGTTTAATCAAAATGCAATGCTTTGCAAGTCTTTACTGCTTGGA  
GGTGGCTGAGTTGGGGGGCCCTGGGCAGGGGTAAGCTGGCAGGCAGTGCCATGGCAGGCCAGGGTCCCCCTCCATG  
GGGTCTGGCCCCCGTTCCAGCATGTCCAGCCCCTGAAGTTGGAGTGGGGGGCGGTCTGCCTTTGCTGCCACTGCC  
AGGCCTCTGCCCTGCAGCTGAACTTGGCCATCACATCAACAGAAAACCCCTCCAGTGCCAGCTGCCAGCGTG  
GGCAGGCCCTGGGGACAATACAGGTCCACCTGAGGGGCTGCAGGGTGACACCCAGCAGCCGCTGCCCCCTCACTG  
CCCACCCAGCGAGGGCAGCCTACCCGAGCCTGCCCCCTGCCAGGTGTGTGCCCTGAGGCTGGCGGCTGGATGCGT  
GGCCAATAAAAAGCAGACCTAG



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**FIGURE 4106**

GCGGCCGGGGAGCTGCGTAGCTCCCCGGCCCCGCGGCCATGCCCAAGCGGAGCTGCCCCCTTCGCGGACGTGGCCCC  
GCTACAGCTCAAGGTCCGCGTGAGCCAGAGGGAGTTGAGCCGCGGCGTGTGCGCCGAGCGCTACTCGCAGGAGGT  
CTTCGAGAAGACCAAGCGACTCCTGTTCTCGGGGCCAGGCCTACCTGGACCACGTGTGGGATGAAGGCTGTGC  
CGTCGTTACCTGCCAGAGTCCCCAAAGCCTGGCCCTACAGGGGCCCCGAGGGCTGCACGTGGGCAGATGCTGAT  
TGGACCAGACGGCCGCCTGATCAGGAGCCTTGGGCAGGCCTCCGAAGCTGACCCATCTGGGGTAGCGTCCATTGC  
CTGTTCTCATGCGTGCGAGCCGTGGATGGGAAGGCGGTCTGCGGTCACTGTGAGCGAGCCCTGTGCGGGCAGTG  
TGTGCGCACCTGCTGGGGCTGCGGCTCCGTGGCCGTGTACCCTGTGTGGCCTCGTGGACTGCAGTGACATGTACGA  
GAAAGTGCTGTGCACCAGCTGTGCCATGTTGAGACCTGAGGGCTGGCTCAAGCCGGCTGCCTTCACCGGGAGCCA  
CGCCGTGCATGGCAGCCTTCCCTGGACGAGCGCTCGGTGTTACACTGAACTGTGGGGTCGACGGGAGGGGTGCC  
TTTTACATGTTCTATTTTGTATCCTAATGACAGAATGAATAAACCTCTTTATATTTGCAAAAAAAAAAAAAAAAAA

A

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**FIGURE 4107**

MPKRSCPFADVAPLQLKVRVSQRELSRGVCAERYSQEVFEKTKRLLFLGAQAYLDHVWDEGCAVVHLPESPKPGP  
TGAPRAARGQMLIGPDGRLIRSLGQASEADPSGVASIACSSCVRAVDGKAVCGQCERALCGQCVRTCWGCGSVAC  
TLCGLVDCSDMYEKVLCTSCAMFET

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**FIGURE 4108**

GCGGCCGGGGAGCTGCGTAGCTCCCGGCCCGCGGCCATGCCCAAGCGGAGCTGCCCCTTCGCGGACGTGGCCCC  
GCTACAGCTCAAGGTCCGCGTGAGCCAGAGGGAGTTGAGCCGCGGCGTGTGCGCCGAGCGCTACTCGCAGGAGGT  
CTTCGACCCATCTGGGGTAGCGTCCATTGCCTGTTCTCATGCGTGCGAGCCGTGGATGGGAAGGCGGTCTGCGG  
TCAGTGTGAGCGAGCCCTGTGCGGGCAGTGTGTGCGCACCTGCTGGGGCTGCGGCTCCGTGGCCTGTACCCTGTG  
TGGCCTCGTGGACTGCAGTGACATGTACGAGAAAGTGCTGTGCACCAGCTGTGCCATGTTGAGACCTTGAGGCTG  
GCTCAAGCCGGCTGCCTTCACCGGGAGCCACGCCGTGCATGGCAGCCTTCCTGGACGAGCGCTCGGTGTTACA  
CTGAACTGTGGGGTCGACGGGAGGGGTGCCTTTTACATGTTCTATTTGTATCCTAATGACAGAATGAATAAAC  
TCTTTATATTTGCAAAAAAAAAAAAAAAAAA

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**FIGURE 4109**

MPKRSCPFADVAPLQLKVRVSQRELSRGVCAERYSQEVFDP SGVASIACSSCVRAVDGKAVCGQCERALCGQCVR  
TCWGCGSVACTLCGLVDCSDMYEKVLCTSCAMFET

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**FIGURE 4110**

ATCCTGGGACAGGGCACAGGGCCATCTGTCACCAGGGGCTTAGGGAAGGCCGAGCCAGCCTGGGTCAAAGAAGTC  
AAAGGGGCTGCCTGGAGGAGGCAGCCTGTCAGCTGGTGCATCAGAGGCTGTGGCCAGGCCAGCTGGGCTCGGGGA  
GCGCCAGCCTGAGAGGAGCGCTGAGCGTCGCGGGAGCCTCGGGCACCATGAGCGACGTGGCTATTGTGAAGGAG  
GGTTGGCTGCACAAACGAGGGGAGTACATCAAGACCTGGCGGCCACGCTACTTCCTCCTCAAGAATGATGGCACC  
TTCATTGGCTACAAGGAGCGGCCGAGGATGTGGACCAACGTGAGGCTCCCTCAACAACCTTCTCTGTGGCGCAG  
TGCCAGCTGATGAAGACGGAGCGGCCCCGGCCCAACACCTTCATCATCCGCTGCCTGCAGTGGACCACTGTCATC  
GAACGCACCTTCCATGTGGAGACTCCTGAGGAGCGGGAGGAGTGGACAACCGCCATCCAGACTGTGGCTGACGGC  
CTCAAGAAGCAGGAGGAGGAGGAGATGGACTTCCGGTCGGGCTCAGCCAGTGACAACCTAGGGGCTGAAGAGATG  
GAGGTGTCCCTGGCCAAGCCCAAGCACCGCGTGACCATGAACGAGTTTGAGTACCTGAAGCTGCTGGGCAAGGGC  
ACTTTCGGCAAGGTGATCCTGGTGAAGGAGAAGGCCACAGGCCGCTACTACGCCATGAAGATCCTCAAGAAGGAA  
GTCATCGTGGCCAAGGACGAGGTGGCCCCACACACTCACCGAGAACC GCGTCTGCAGAACTCCAGGCACCCCTTC  
CTCACAGCCCTGAAGTACTCTTCCAGACCCACGACCGCCTCTGCTTTGTCATGGAGTACGCCAACGGGGGCGAG  
CTGTTCTTCCACCTGTCCC GGGAACGTGTGTTCTCCGAGGACCGGGCCCGCTTCTATGGCGCTGAGATTGTGTCA  
GCCCTGGACTACCTGCACCTCGGAGAAGAACGTGGTGTACCGGGACCTCAAGCTGGAGAACCTCATGCTGGACAAG  
GACGGGCACATTAAGATCACAGACTTCGGGCTGTGCAAGGAGGGGATCAAGGACGGTGCCACCATGAAGACCTTT  
TGCGGCACACCTGAGTACCTGGCCCCGAGGTGCTGGAGGACAATGACTACGGCCGTGCAGTGGACTGGTGGGGG  
CTGGGCGTGGTCATGTACGAGATGATGTGCGGTGCGCTGCCCTTCTACAACCAGGACCATGAGAAGCTTTTTGAG  
CTCATCCTCATGGAGGAGATCCGCTTCCCGCGCACGCTTGGTCCCGAGGCCAAGTCCCTTGCTTTACGGGCTGCTC  
AAGAAGGACCCCAAGCAGAGGCTTGGCGGGGGCTCCGAGGACGCCAAGGAGATCATGCAGCATCGCTTCTTTGCC  
GGTATCGTGTGGCAGCACGTGTACGAGAAGAAGCTCAGCCCACCTTCAAGCCCCAGGTACGTCGGAGACTGAC  
ACCAGGTATTTTGATGAGGAGTTCACGGCCCAGATGATCACCATCACACCACCTGACCAAGATGACAGCATGGAG  
TGTGTGGACAGCGAGCGCAGGCCCCACTTCCCCAGTTTCTCCTACTCGGCCAGCAGCACGGCCTGAGGCGGGGT  
GGACTGCGCTGGACGATAGCTTGGAGGGATGGAGAGGCGGCCTCGTGCCATGATCTGTATTTAATGGTTTTATT  
TCTCGGGTGCAATTTGAGAGAAGCCACGCTGTCTCTCGAGCCCAGATGGAAAGACGTTTTTGTGCTGTGGGCAGC  
ACCTTCCCCCGCAGCGGGGTAGGGAAGAAAATATCCTGCGGGTTTTAATTTATTTTCATCCAGTTTGTCTCCGG  
GTGTGGCCTCAGCCCTCAGAACAAATCCGATTACGTAGGGAAATGTTAAGGACTTCTACAGCTATGCGCAATGTG  
GCATTGGGGGGCCGGGCAGGTCTGCCCATGTGTCCCCTCACTCTGTGAGCCAGCCGCCCTGGGCTGTCTGTAC  
CAGCTATCTGTATCTCTCTGGGGCCCTGGGCCTCAGTTCAACCTGGTGGCACCAGATGCAACCTCACTATGGTA  
TGCTGGCCAGCACCTCTCCTGGGGGTGGCAGGCACACAGCAGCCCCCAGCACTAAGGCCGTGTCTCTGAGGAC  
GTCATCGGAGGCTGGGCCCCCTGGGATGGGACCAGGGATGGGGGATGGGCCAGGGTTTACCCAGTGGGACAGAGGA  
GCAAGGTTTAAATTTGTTATTGTGTATTATGTTGTTCAAATGCATTTTGGGGTTTTTAATCTTTGTGACAGGAA  
AGCCCTCCCCCTTCCCCTTCTGTGTACAGTTCTTGGTGACTGTCCCACGGAGCCTCCCCCTCAGATGATCTCT  
CCACGGTAGCACTTGACCTTTTCGACGCTTAACCTTTCGCTGTGCCCCAGGCCCTCCCTGACTCCCTGTGGGG  
GTGGCCATCCCTGGGCCCCCTCCACGCCTCCTGGCCAGACGCTGCCGCTGCCGCTGCACCACGGCGTTTTTTTACA  
ACATTCAACTTTAGTATTTTTACTATTATAATATAATATGGAACCTTCCCTCCAAATCT

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**FIGURE 4111**

MSDVAIVKEGWLHKRGEYIKTWRPRYFLLKNDGTFIGYKERPDVDQREAPLNNFSVAQCQLMKTERPRPNTFII  
RCLQWITTVIERTFHVETPEEREWTTAIQTVADGLKKQEEEEMDFRSGSPSDNSGAEEMEVSIAKPKHRVTMNEF  
EYLKLLGKGTFGKVILVKEKATGRYYAMKILKKEVIVAKDEVAHTLTENRVLQNSRHPFLTALKYSFQTHDRLCF  
VMEYANGGELFFHLSRERVFSEDRARFYGAEIVSALDYLHSEKNVVYRDLKLENMLDKDGHKITDFGLCKEIGI  
KDGA TMKTF CGTPEYLAPEVLEDNDYGRAVDWWGLGVVYEMMCGRLPFYNQDHEKLFELILMEEIRFPRTLGP  
AKSLLSGLLKKDPKQRLGGGSEDAKEIMQHRFFAGIVWQHVEKKLSPPFKPQVTSETDTRYFDEEFTAQMITIT  
PPDQDDSMECVDSERRPHFPQFSYSASSTA

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**FIGURE 4112**

AGCCTGCAGCGGCAGTCGCTCCTGGACATGTCTCTGGTGAAGTTGCAGCTTTGCCACATGCTTGTGGAGCCCAAC  
CTGTGCCGCTCAGTCCTCATTGCCAACACGGTCCGGCAGATCCAAGAGGAGATGACGCAGGATGGGACGTGGCGC  
ACAGTGGCACCACAGGCTGCAGAGCGGGCGCCGCTCGACCGCTTGGTCTCCACGGAGATCCTGTGCCGTGCAGCG  
TGGGGGCAAGAGGGGGCACATCCTGCTCCTGGCTTGGGGGACGGCCACACACAGGGTCCAGTTTCTGACCTTTGC  
CCAGTCACCTCAGCACAGGCACCAAGGCACCTGCAGAGCAGCGCCTGGGAGATGGATGGCCCTCGAGAAAACAGA  
GGAAGCTTTCACAAGTCACTTGATCAGATATTTGAAACGCTGGAGACTAAAAACCCAGCTGCATGGAAGAGCTG  
TTCTCAGACGTGGACAGCCCTACTACGACCTGGACACAGTACTGACAGGCATGATGGGGGGTGCCAGGCCGGGC  
CCCTGCGAAGGGCTCGAGGGCTTGGCTCCGGCCACCCAGGCCCTAGCTCCAGCTGCAAGTCCGACCTGGGCGAG  
CTGGACCACGTGGTGGAGATCCTGGTGGAGACCTGAGCAGGAGCCCTGAGTGCTCACAGCCGCCTCTGACGCATT  
GACACGTGAGCACTGGCTCCACGGAGGGTGCGCCTGCCGCCAGCGGCCAGCCTTGCTGCCCTGTCTGCTGATT  
CTGAGAAATCCAGAACAGCCATTACAGTGGGGCTGCAGCCCTAGGCCCGTCCCACTCACCTCCCCCTGTGG  
AGCGCCAGGCAGAGGCTGTTCTGGAAGGCTTCTTGTCTTCTGACGTCCCCACAGCCCTGGGCCCCCTCGTGTCTCT  
TTGTGTCCCCACTGTAGAGGACGGTGAGCCGCAGCTGCATCAACCTCCTTTTACCTTTAGATAGGTGAATTTTT  
ACAATTCAGTTTTACATGTTTTGGGCAGTATTTTGTCTTAAGATATATTTTTTAACTTTTTATACCTTATCTCT  
TTAGATTTTTTTCAGCTATTTTTCTTAAAAGTATATTTTTTCTATAAACATCCTTTGCTGCTACATTAGAACTTTTA  
TAGCCTAAACAATTGCAGTTGGTGTGTTTCATTTTTTTAAGGTTTAAATAAGGGTTTTTGTGTTTTGTTTTGTTTT  
TTGCAGTGAGCATCACTACAGTCTCAGTCAACAGTGTGAATGTATCATGTTTTACTTTAAATGTGTGTGTGATAC  
TTCTTCATTATGTCTCGCTGCAGTGAGACCTGGGTGAAAATCAGGAGCCGCACACAGCCACATCTTCCTAGAC  
CTAAGAGTAAATTATGGAGGATTTTATTTATGTCTATTTATATGTAAATGTCATTGAAGACAAAGGTCAAATATT  
TGTCTGTTTGTAGATCACAGGCACCAGTTGGTCTTCAGGGACCTCATAGCCCTCGGTGGTGCCTTCTCAAGGCA  
GTGTTCTCGGAGGCTCCCATCAGGGTCAGCCCATGCACCTGCCCTGGGTGAGGAAGTAGCATTGCTGCTGGATGA  
GAAACGCCTGCGCTGCTCTGTTAGACTGGTGTGAAACAAAAGGTTAAGGCTAGGTTGAAGTCTAGAATGAAAGA  
AATCTGAATCCATGTCAATTCATAACCCCTTGATCTGTAGTGTGATGGGTGCTGCCGCAGGCAGGGAGTGAGCTGG  
GGGTGCCGTGCAGCCTTCCACTCCTGCCCCGCTCACCCACATGCTCCCTGTTTCTCATGCTTTCTCTAACTTCC  
TCACCCCTTAACCAAAAAGGTGTGTTTTCTTTTGTGCATATAGCCATTCTTAAATATCAGTGATGTAAACCTCAC  
TTTATTAAAAAATTATCCAGCAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4113**

MFARGLKRRKCVGHEEDVEGALAGLKTIVSSYSLQRQSLDMSLVKLQLCHMLVEPNLCRSVLIANTVRQIQEEMTQ  
DGTWRTVAPQAAERAPLDRLVSTEILCRAAWGQEGAHFAPGLGDGHTQGPVSDLCPVTSAQAPRHLQSSAWEMDG  
PRENRGSFHKSLDQIFETLETKNPSCMEELFSDVDSFYDLDTVLTGMMGGARPGPCGLEGLAPATPGPSSSCK  
SDLGELDHVVEILVET



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**FIGURE 4114**

TCTCCAACAAAGGCCTCCCAGCCCCATCGAGAAATGACCAAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGG  
CTTCTACCCCAGCGACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACCTACAAGACCACACCTCC  
CATGCTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGAA  
CGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAGAGCCTCTCCCTGTCTCCGGG  
TAAATGAGTGCCACGGCCGGCAAGCCCCGCTCCCCAGGCTCTCGGGGTCGCGTGAGGATGCTTGGCACGTACCC  
CGTGTACATACTTCCCAGGCACCCAGCATGGAATAAAGCACCCAGCGCTGCCCTGGGCCCTGC

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**FIGURE 4115**

GGACTCCCCCTCGCCCTCTGACACAGAAACCACCAGAAGAAAAGGGAACCTTCAGGAACTTCCACCAAGGGCCCAT  
CCGTCTTCCCCCTGGCGCCCTGCTCCAGGAGCACCTCCGAGAGCACAGCCGCCCTGGGCTGCCTGGTCAAGGACT  
ACTTCCCCGAACCGGTGACGGTGTCTGTGGAACCTCAGGCGCCCTGACCAGCGGCGTGACACCTTCCCGGCTGTCC  
TACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCTTGGGCACGAAGACCTACA  
CCTGCAACGTAGATCACAAGCCCAGCAACACCAAGGTGGACAAGAGAGTTGAGTCCAAATATGGTCCCCCATGCC  
CATCATGCCCAGCACCTGAGTTCTTGGGGGGACCATCAGTCTTCTGTTCCCCC AAAACCCAAGGACACTCTCA  
TGATCTCCCGGACCCCTGAGGTACGTGCGTGGTGGTGGACGTGAGCCAGGAAGACCCCGAGGTCCAGTTCAACT  
GGTACGTGGATGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTTCAACAGCACGTACCGTG  
TGGTCAGCGTCCTCACCCTCTGCACCAGGACTGGCTGAACGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAG  
GCCTCCCGTCTTCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAGCCCCGAGAGCCACAGGTGTACACCCTGC  
CCCCATCCCAGGAGGAGATGACCAAGAACCAGGTACGCTGACCTGCCTGGTCAAAGGCTTCTACCCAGCGACA  
TCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGAGAGAACAACCTACAAGACCACGCCTCCCGTGCTGGACTCCGACG  
GCTCCTTCTTCTCTACAGCAGGCTAACCCTGGACAAGAGCAGGTGGCAGGAGGGGAATGTCTTCTCATGCTCCG  
TGATGCATGAGGCTCTGCACAACCACTACACACAGAAGAGCCTCTCCCTGTCTCTGGGTAAATGAGTGCCAGGGC  
CGGCAAGCCCCCGCTCCCCGGGCTCTCGGGGTGCGCGAGGATGCTTGGCACGTACCCCGTCTACATACTTCCCA  
GGCACCCAGCATGGAAATAAAGCACCCACCACTGCCCTGGG

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**FIGURE 4116**

CACCCCTCCTCTGGAGAAGCCCCTAGATCACAGCTCCTCACCATGGACTGGACCTGAAGGATCCTCTTCTTGATG  
GCAGCAGCAACAGGTGCCCCTCCCTGCAGCTGGTGCAGTCTGGGCCTGAGGTGAAGAAGCCTGGGGCCTCAGTG  
AAGGTCTCCTATAAGTCTTCTGGTTACACCTTCACCATCTATGGTATGAATTGGGTATGATAGACCCCTGGACAG  
GGCTTTGAGTGGATGTGATGGATCATCACCTACACTGGGAACCCAACGTATACCCACGGCTTCACAGGATGGTTT  
GTCTTCTCCATGGACACGTCTGTGACGACGGCGTGTCTTCAGATCAGCAGCCTAAAGGCTGAGGACACGGCCGAG  
TATTACTGTGCGAAGTACACAGTGTGGAAACCCACATCCCGAGAGTTTCAGAAAGCCTGAGGAAGGAGGCAGCTG  
TGCTGAGCTGAGGCAGTGAGCTCTGTCACAGGCCACATGGACCTAAATCCTTGATGGAGATTACAGGACTACGTA  
AATTGGACTGATCGTTTTTATGCTGTTAAATTAATAGAAGGCCAGCCCCTTGTTTCAGCTCCTAAGAAGAGAGCC  
CAGGTTTATCCAGATTATACAACACAACCAGCTTCTGATGACTCTCCTGTTACAACATCCATGGAGATATTTGT  
GTATTATATAATTACCAAATAATGTGAAATGCCAAGTTGCAATACTGCACACCCTAGGGTATGTTCTTGCAA  
TTCAGCGGAGGAGAAATTCTTTCAGAGACAGATGGATCTGAATTGGGGTCCTGTCCAGGTGCAGCTACAGCAGT  
GGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACCTGCGCTGTCTATGGTGGGTCTTCAGTGGTT  
ACTACTGGAGCTGGATCCGCCAGCCCCAGGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCA  
CCAATAACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAGC  
TGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAG

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**FIGURE 4117**

MTLLQLHPWRYFVYYIIHQTNVKCPSCNTAHPVCSNSAEEKFFQRQMDLNWGFVPGAATAVGRRTVEAFGDPV  
PHLRCLWWVLQWLLLELDPPAPREGAGVDWGNQS

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**FIGURE 4118**

GCTCACATGGGAAGTGCTTTCTGAGAGTCATGGACCTCCTGCACAAGAACATGAAACACCTGTGGTTCTTCCTCC  
TCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTT  
CGGAGACCTGTCCCTCACCTGCGCTGTCTATGGTGGGTCCCTCAGTGGTTACTACTGGAGCTGGATCCGCCAGC  
CCCCAGGGAAGGGGCTGGAGTGGATTGGGGAATCAATCATAGTGAAGCACCAACTACAACCCGTCCCTCAAGA  
GTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCGGACA  
CGGCTGTGTATTACTGTGCGAGAGGCACAGTGAGGGGAGAAGAGGAAGAGACACCAGAGACCTCTCACTTTTCAC  
GTGCACACAGAGAAGAGGCCATGTGGAGACGTAGTGCACTAGAAAGTGGCCCTGTGCAAGCCAGGAAGAAGCCAT  
ACTAAGAACCAATTTTGCCAGCTCCTTGATCTTCGACATTCAGACTGTAGAATTGTAAGAAAATCAATATTTGTT  
GTTTAAGCCACCCAATCCTGTTGTCTTCTTACGAAGACCCAACTGACTAATACCACCTAACTCTGTTAGCTCTG  
TCTCCTGGAGGGAGAAGCAGCCCCCTGAGGCTGGGCACTGCATCTCTCAGATTTCCACGTGAAGTAGGCAAAAAT  
AGTAGTTCTCATATAAAAATGTGTCATGGCTCTGTTGGCCATTTTGGAGCATGGTCTCTGAAACCAGCCCTGGTG  
TGTGTGTGTAACAAATGTCCCTTATCTTTTATTTGGACATAACAAATAGACGATAGGTACCAGCTG

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**FIGURE 4119**

CTCTTTCCAGCCAGCGCCGAGCGATGGGCACCTCTCGGGACAACCTGGCACAAGGGCCGCAAAGCTGGGGGCAAGA  
GAAGGCCCTGCCACAAGAAGCGGAAGTATGAGTTGGGGCGCCCAGCTGCCAACAGCAAGACTGACCCGTGCCGCA  
TCCACACAGTCCGTGTGCGAGGAGGTAACAAGAAATACTGTGCCCCGAGGCTGGACGTGGGGAATTTCTCCTGGG  
GCTCAGAATGCTGCGCTGGTGAAACAAGGGTCATCGATGTTGTCTACAATGCATCCAATAACGAGCTGGTTCGTA  
CCAAGACCGTGGTGAAGAATTGCATCGTGGCCATCGACAGCACGCCCTACCGACAGTGGTACGAGTCCCACTGTG  
CACTGCCCCCTGGGCCGCAAGAAGGGAGCCAAGCTGACTCCTGAGGAAGAAGAGATTTTAAACAAAAAACGATCTA  
AAAAAATTCAGAAGAAATATGATGAAAGGAAGAAGATGCCAAAATGAGCAGTCTCCTGGGGGAGCAGTTCCAGC  
AGGGCAAGCTTCTTGCGTG CATGGCTTCAAGGCCGGGACAGTGTGGCCGAGCAGATGGCTATGTGCTAGAGGGCA  
AAGAGTTGGAGTTCTATCTTAGGAAAATCAAGGCCCAGAAAGGCAAATAAATCCTTGTTTTGTCTTCACCCATGT  
AATAAAGGTGTTTATTGTTTTGTTCCTCA

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**FIGURE 4120**

CTTCCACCAAGGGCCCATCGGTCTTCCCCCTGGCGCCCTGCTCCAGGAGCACCTCTGGGGGCACAGCGGCCCTGG  
GCTGCCTGGTCAAGGACTACTTCCCAGAACCGGTGACGGTGTCTGTGGAATCAGGCGCCCTGACCAGCGGCGTGC  
ACACCTTCCCGGCTGTCTTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCT  
TGGGCACCCAGACCTACACCTGCAACGTGAATCACAAGCCCAGCAACACCAAGGTGGACAAGAGAGTTGAGCTCA  
AAACCCCACTTGGTGACACAACCTCACACATGCCCACGGTGCCCAGAGCCCAAATCTTGTGACACACCTCCCCGT  
GCCACGGTGCCCAGAGCCCAAATCTTGTGACACACCTCCCCATGCCACGGTGCCCAGCACCTGAACTCCTGG  
GAGGACCGTCAGTCTTCTCTTCCCCCAAACCCAAAGGATACCCTTATGATTTCCTGGACCCCTGAGGTCACGT  
GCGTGGTGGTGGACGTGAGCCACGAAGACCCCGAGGTCCAGTTCAAGTGGTACGTGACGGCGTGGAGGTGCATA  
ATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTTCCGTGTGGTCAGCGTCCTCACCGTCCTGCACC  
AGGACTGGCTGAACGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAGCCCTCCAGCCCCATCGAGAAAACCA  
TCTCCAAAACCAAAGGACAGCCCGGAGAACCACAGGTGTACACCCTGCCCCATCCCGGGAGGAGATGACCAAGA  
ACCAGGTACGCCTGACCTGCCTGGTCAAAGGCTTCTACCCAGCGACATCGCCGTGGAGTGGGAGAGCAGCGGGC  
AGCCGGAGAACAACCTACAACACCACGCCTCCCATGCTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCA  
CCGTGGACAAGAGCAGGTGGCAGCAGGGGAACATCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCGCT  
TCACGCAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGAGTGCGACGGCCGGCAAGCCCCGCTCCCCGGGCTCTC  
GGGGTCGCGCGAGGATGCTTGGCACGTACCCCGTGTACATACTTCCCGGGCACCCAGCATGGAAATAAAGCACCC  
AGCGCTGCCCTGGG

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**FIGURE 4121**

GACAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTCAGCCTGA  
CCTGCCTGGTCAAAGGCTTCTACCCCAGCGACATCGCCGTGGAGTGGGAGAGCAGCGGGCAGCCGGAGAACA  
ACAACACCACGCCTCCCATGCTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCGTGGACAAGAGCA  
GGTGGCAGCAGGGGAACATCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCGCTTCACGCAGAAGAGCC  
TCTCCCTGTCTCCGGAGCTGCAACTGGAGGAGAGCTGTGCGGAGGCGCAGGACGGGGAGCTGGACGGGCTGTGGA  
CGACCATCACCATCTTCATCACACTCTTCCTGTAAAGCGTGTGCTACAGTGCCACCGTCACCTTCTTCAAGGTGA  
AGTGGATCTTCTCCTCGGTGGTGGACCTGAAGCAGACCATCATCCCCGACTATAGGAACATGATTGGGCAGGGGG  
CCTAGGGCCACCCTCTGCGGGGTGTCCAGGGCCACCCAGATCCCACACACGAGCCGTGGGCCATGCTCAGCCACC  
ACCCAGGCCACAACCTGCCCCGACCTCACCGCCCTCAACCCCATGGCTCTCTGTCTTTGCAGTCGCCCTCTGAGC  
CCTGACACGCCCCCTTCCAGACCCTGTGCATAGCAGGTCTACCCAGACCTCCGCTGCTTGGTGCATGCAGGGA  
GCTGGGGACCAGGTGTCCCTCAGCAGGATGTCCCTGCCCTCCAGACCGCCAGATGCTCACACAAAAGGAGGCAG  
TGACCAGCATCCGAGGCCCCCACCAGGCAGGAGCTGGCCCTGGAGCCAACCCCGTCCACGCCAGCCTCCTGAAC  
ACAGGCGTGGTTTTCCAGATGCCCGCAGCCAGCCAGCCTCCATTCCGGGCACTCCCGTGAACCTCTGACATGAGGA  
ATGAGGTTGTCTGATTTCAGCAAAGAACGCTGCTCTCTGGCTCCTGGGAACAGTCTCGGTGCCAGCACCACC  
CTTGGCTGCCTGCCTACACTGCTGGATTCTCGGGTGGAACCTGGACCCGCAGGGACAGCCAGCCCCAGAGTCCGCA  
CTGGGGAGAGAAGGGGCCAG



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**FIGURE 4122**

AAGAAGAGGCGAGAAAGACCCCCGACAGACCAAAGCCCGTGTGCCGCTGCATCCTGCATCCAGCACCTACCTCC  
CGCCACTGTGCGCCACTGCCACCATGCCCAAGAGAAAGGCTGAAGGGGATGCTAAGGGAGATAAAGCCAAGGTGAA  
GGATGAACCACAGAGAAGATCCGCAAGGTTGTCTGCTAAACCTCCTCCTCCAAAGCCAGACAGCCCAAGCCTAGA  
AAGGCCCCCTGCAAAGAAGGGAGAGAAGGTACCCAAAGGGAAAAAGGGAAAAGCTGATGCCCAGGAGGAGGGATT  
CCTGACTTTGACACACATGGCCACCTTGGCACAAAAGCCTTGTGGTATAGAAAAACAAATTTGTTTTATGTCCT  
CTTCTCCCTTTCCATCTTTTCAGCATAGACTTAACTCCCTTAAGCCCAGACATCTGTTGGGACCTGACCCCTAGTC  
ATTGGTTACCAAGTGTGTCTAGGCAATCTGGACTTTCCAGTGATGCCACTGAGATGGCACCTGTCAAAAGAGTAGTG  
GTTCCATTTCTAGATTGTAGATCTTCAGATAAATTCTGCCATTTTCATTTCACTTCCTGAAAGTCAGGGTTCGGCT  
TCTAAAAATTTGTTAAACAATATGCTAAATGTGAAATGTCACCCCTCACTCTAAACTTTCCCCGTTTCAGAGCATC  
AGATGAAGACTTCATTGGGTTTTATAGTGGCTTTCTGATTTTGGTAGTCCATTGAAGAAGGGAGTTTGAAAGTT  
GTTGTATACTGTTAACGATTATCTGCCCATGTCTGCCT

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**FIGURE 4123**

CTCTTTCCAGCCAGTGCCGAGCGATGGACATCTCTTGGGACAACCTGGCACAAAGTGCCACAAAACCAGGGACAAGA  
GAAAGCCCTACCACAAGAAGCGGAAGTATGAGTTGGGGCACCAGCTGCCAACACCAAGACTGGCCCCCGCCGCA  
TCCACACAGTCCGTGTGTGGGGAGGTAACAAGAAATACTGTGCCCTGAGGCTGGACGTGAGGAATTTCTCCTGGG  
GCTCAGAATGTTGTGCTCATAAAACAACGATCATCGATGTTGTCTACAATGCATCTAATAACGAGCTGGTTCGTC  
CCAAGACCCTGGTGAAGAATTGCATTGTGCTCATTGACAGCACACTGTACCGACAGTGGTACGAGTCCCACTATG  
CGCCGCCCTGGGCTGCAAGAAGGGAGCCAAGCTGACTCCTGAGGAAGAAGAGATTTTGAACAAAAGCGATCTA  
AAAAAATTCAGAAGAAATATCATGAAAGGAAAAAGAATGCCAAAATCAGCAGTCTCCTGGGGGAGCAGTTCAGC  
AGGGCAAGCTTCTTGTCATGCATTGCTTCAAGGCCAGGACAGTGTGGCTGAGCAGATGGGTATGTGCTAGAGGGCA  
AAGAGTTGGAGTTCTATCTTAGGAAATCAAGGCCCGGAAGGGCAAATAAATCCTTGTTTTGTCTTCACCCATGT  
AATAAAGGTGTTTATTGTTTTGTTCC

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**FIGURE 4124**

ATGGATGAGGGAACCAGCTTCAGAACAGTTTTAGATAAAGCTGTGCAAGCAGATGGACACGTGAAAGAATGTTAC  
CCGTCTCATCGTGACCCCATCGTGCTTTTGTGTAAGCCAGAGCCTGAGCTGAATGCTGCCATCCCTTCTGCTAAT  
CCAGCAAAGACCATGCAGGGCAGTGAGGTTGTAAATGTCTTAAATCCTTATTGTCAAATCTTGATGAAGTAAAG  
AAGGAAAGAGAGGGTCTGGAGAATGACTTGAAATCTGTGAATTTTGACATGACAAGCAAGTTTTGACAGCCCTG  
GCTCAAGATGGTGTGATAAATGAAGAAGCTCTTCTGTACTGAAGTAGATCGAGTCTATGGAGGTCTTACAAC  
AAAGTCCAAGAATCTCTAAAGACACAGGAGGGACTTCTTAAAAATATTCAGGTCTCACATCAGGAATTTTCGAAA  
ATGAAGCAATCTAATAATGAAGCTAACTTAAGAAAAGAAGTTTGAAGAATTTAGCTACTGCATATGACAACTTT  
GTTGAAGTTGTAGCTAATTCGAAGGAAGACACAAAGTTTTACAATGAGTTGACTGAAATCCTGGTCAGGTTCCAG  
AACAAATGCAGCGATATAGTTTTGGCATGGAAGACAGAAAGAGATGAACTCTTAAAGAGTAGGATGGATTATATT  
ATTTGTCGAAATGCCTTTGCATCTAACAAGAACCTCTTGGGTTTCATCCTTTGGAGAACCTGATATCATGGAAAT  
GGACTGAACTAG

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**FIGURE 4125A**

CCCAGGATGGCGGCCAGGTGACTCTGGAGGACGCGCTGTCCAACGTGGACCTCCTGGAGGAGCTGCCCTGCCCG  
GACCAGCAGCCCTGCATCGAGCCCCGCCATCCTCGCTGCTCTACCAGCCAAATTTCAACACTAATTTGAAGAC  
AGAAATGCATTGTACTGGCATCGCAAGATACATTGAACAAGCCACCGTCCACTCTAGCATGAACGAGATGCTG  
GAGGAGGGCCAAAGATATGCTGTATGCTGTACACCTGGAGGAGCTGCTCCCGGGCCATCCACAGGTGAAATGT  
AACGAGCAGCCTAACAGAGTGGAAATCTACGAGAAAACCGTGGAGGTTCTGGAGCCTGAGGTCACAAAATGATG  
AATTTTCATGTACTTCCAGAGAAATGCCATTGAGCGTTTCTGCGGGGAAGTGAGGCGCCTGTGCCATGCCGAGAGG  
AGGAAGGACTTCGTGTGAGAAGCTACCTGATCACAAGTGGGCAAAATTCATCAACATGTTGCTGTGCTGGACGAG  
CTGAAGAACATGAAGTGCAGTGTGAAGAAGCAGGACTCAGCGTACAAGAGGGCCGCTCAGTTTTTACGTAATAATG  
GCAGATCCACAGTCCATCCAGGAATCGCAGAATCTGTCCATGTTCTGGCCAATCATAACAAGATCACACAGTCT  
CTGCAGCAGCAGCTCGAAGTGATTCTGGCTACGAAGAGCTCCTGGCAGATATTGTGAATCTGTGTGTGATTAC  
TACGAGAACAGGATGTATTTGACGCCAGTGAGAAACACATGCTTCTCAAAGTCATGGGATTTGGTCTGTACCTG  
ATGGATGGGAGTGTGAGTAACATCTATAAGTTGGATGCCAAGAAAAGAATAAACTTATCCAAAATCGACAAGTAC  
TTCAAGCAACTCCAGGTGGTTCCGCTATTTGGGGACATGCAATAGAACTGGCAAGATATATCAAGACCAGCGCC  
CACTACGAGGAAAATAAATCTCGATGGACGTGCACATCCTCCGGCAGCAGCCCTCAGTACAACATCTGCCGAGCAG  
ATGATCCAGATCCGCGAGGACCACATGCGCTTCATTTCGGAGGTGGCGCGCTACAGCAACAGCGAGGTGGTCACG  
GGCTCGGGGCCCCAGGAGGCCCCAGAAGACGGACGCGGAGTACCGCAAGCTCTTCGACCTGGCGCTGCAGGGCCTG  
CAGCTGTTGTGCGAGTGGAGCGCGCACGTGATGGAAGTGATTCTTGGAAAGCTTGTGCACCCACCGACAAGTAC  
TCCAACAAGGACTGCCCCGACAGCGCTGAAGAGTACGAGCGTGCCACGCGCTACAACATACACAGCGAGGAGAAG  
TTTGCCCTAGTGGAGGTGATCGCCATGATCAAAGGCTGCGAGGTGCTGATGGGCAGGATGGAGAGCGTGTTCAC  
CACGCCATCCGGCACACCGTCTATGCCGCACTGCAGGACTTCTCCAGGTGACCCCTAGGGAGCCGCTGCCGCAG  
GCCATCAAGAAGAAGAAGAACGTCATCCAGAGTGTCTGCGAGGCCATCAGGAAGACCGTGTGTGACTGGGAGACG  
GGGCATGAGCCCTTCAATGACCCAGCCTTGGCGGGCGAGAAGGACCCCAAGAGCGGCTTCGACATAAAAGTACCA  
CGCCGCGCCGTGGGACCCCTCCAGCACTCAGCTTTACATGGTGAGAACCATGCTAGAGTCCCTCATTGCAGACAAA  
AGTGGTTTCCAAGAAAACCTTGAGAAGTAGCCTTGAGGGGGCCACCATATTGGACATAGAAAAATTTTCATCGAGAG  
TCATTCTTCTACACTCACTTGATAAATTTAGTGAAACGCTGCAGCAGTGTGTGACCTTTCGAGCTGTGGTTC  
CGAGAGTTCTTCTGAGCTGACCATGGGCAGGAGGATCCAGTTCCCCATTGAGATGTCGATGCCCTGGATCCTG  
ACGGACCACATCCTGGAGACCAAGGAGGCATCGATGATGGAGTACGTGCTCTACTCCCTGGACCTGTACAATGAC  
AGCGCCCACTACGCGCTCACCAGGTTCAACAAGCAGTTTCTGTACGACGAAATTGAGGCCGAGGTGAATCTATGT  
TTTGACCAATTTGTTTACAAGCTAGCAGACCAGATATTGCTTATTATAAGGTTATGGCAGGAAGTTTGCTTCTT  
GATAAACGGTTACGATCAGAATGCAAGAATCAGGGAGCCACGATCCACCTCCCGCCGTCTAACCGCTACGAGACG  
CTGCTGAAGCAGAGGCATGTGCAGCTCCTCGGCAGATCAATAGACCTCAATCGTCTGATCACCAGCGGCTCTCA  
GCAGCCATGTATAAGTCCCTAGAACTGGCGATTGGACGATTTGAAAGTGAAGATTGACCTCCATAGTTGAGCTG  
GATGGCTGTTTGGAAATCAACCGCATGACCCACAAGCTGCTGAGCCGGTACCTGACGCTGGACGGCTTCGACGCC  
ATGTTCCGGGAGGCCAACACACGCTGTGAGCGCCCTACGGGAGGATCACCTGCACGTCTTCTGGGAGCTCAAC  
TATGACTTCTGCCCAACTACTGCTACAACGGCTCTACCAACCGGTTTGTTCGGACAGTGTTACCATTTTCTCAG  
GAATTTCAAAGAGATAAGCAGCCTAATGCACAGCCTCAGTATCTGCATGGATCCAAGGCTTTGAACTTGCCCTAC  
TCCAGCATTTACGGCAGCTACCGGAACCTCGTGGGACCTCCACACTTCAAGTCATCTGCCGGCTTCTCGGCTAC  
CAGGGTATCGCCGTGGTTCATGGAGGAGCTGCTGAAGGTCGTCAAGAGCCTGCTGCAAGGCACAATCCTGCAGTAC  
GTGAAGACGCTGATGGAGGTGATGCCAAGATCTGCCGCTGCCCGGCACGAGTACGGCTCTCCTGGTATCCTG  
GAGTTCTTCCACCACCAGCTGAAGGACATCGTGGAGTACGCAGAGXCTGAAGACGGTGTGCTTCCAGAACCTGCG  
GGAGGTGGGGAACGCCATCCTCTTCTGCTGCTCATCGAGCAGAGCCTGTCTTTAGAAGAAGTGTGTGACCTGCT  
GCACGCGGCTCCTTTCCAGAACATCTTGC CGGAGTCCATGTGAAAGAGGGGGAGAGACTTGATGCCAAAATGAA  
AAGACTAGAATCAAAGTACGCCCCGCTGCATCTTGTCCCACTGATTGAAAGACTGGGGACCCCTCAGCAAATGCG  
CATCGCAAGAGAGGGGGACCTGCTGACAAAGGAGCGCCTCTGCTGCGGCTGTCCATGTTGAGGTATCCTGAC  
ACGGATCCGGAGCTTTCTGGATGACCCCATCTGGCGCGGGCCTTGCCAGCAATGGGGTCATGCATGTGGACGA  
GTGTGTGGAGTTTACAGACTGTGGAGTGCCATGCAGTTTGTCTACTGCATTCCCGTGGGGACACAGAGTTTAC  
AGTCGAGCAGTGCTTTGGTGATGGGCTACACTGGGCTGGCTGTATGATCATCGTACTTCTTGGGCAGCAGCGCG  
TTTTGCTGTGCTGGATTTCTGCTACCATCTACTTAAAGTCCAGAAACATGATGGCAAAGATGAGATTATTA

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**FIGURE 4125B**

TGTGCCCTTTGAAGAAGATGGTGGAGAGAATTCGCAAGTTCCAGATTCTCAATGATGAGATCATCACCATCCTGGA  
TAAGTACCTGAAGTCAGGCGACGGGGAGGGCACGCCAGTGGAGCATGTGCGCTGCTTCCAGCCGCCCATCCACCA  
GTCCCTCGCCAGCAGCTGAGGGCACGCGCTGCACTCCGTAACTCAACATGGCATGCCTTTCTCTCCGTAAACTAT  
TTAGTGAGATTTTAGGGACTATTTTTCAGTATCTCTGTACCTGTTAAAGGGGTGCTTTTCGATCTAAAACTT  
AATTTTATAAAATTGACTTATTTTCTAGACTAAAATTGTATATGCTTTTGGTAATTAGGAACCTTGAGAATAT  
TGGCTGCTGATTGTTGCCATCACGTTCTACAAAAATGTTTTTCTATGGGATGTTCTGGCAGCTGTGTCATAAAA  
TGCTGCTGGGTTCAATTCATTCCATAAGAACTTAATACCAGCAAATGCATTAAATCCCTTGCCAGTTACCA  
TTAACTGTAACTATTTAGCTTTTGTTTAGGGATCTTCTGATGGTCTTTTATGAGCAATCTTAGTTCTAAGTCAT  
TGTTCCCATCCCTTTTTTGTGTGTTTCAGAAAATAGTGAACCTGATTCCCCTGCTTCCACTAAATCCAGTTGTGA  
CAAAATCTAACGTGACATCAGATCGAAAGGTTATAGAAATAAACTAATGAGATCT

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**FIGURE 4126**

MQIELARYIKTSAHYEENKSRWTCTSSGSSPQYNICEQMIQIREDHMRFISELARYSNSEVVTGSGRQEAQKTD  
EYRKLFDLALQGLQLLSQWSAHVMEVYSWKL VHPTDKYSNKDCPDSAEYERATRYNYTSEEK FALVEVIAMIKG  
LQVLMGRMESVFNHAI RHTVY AALQDFSQVTLREPLRQAIAKKKNV IQSVLQAIRKTVCDWETGHEPFNDPALRG  
EKDPKSGFDIKVPRRAVGPSS TQLYMVRTMLES LIADKSGSKKTLRSSLEGPTILDIEKFHRESFFYTHLINFSE  
TLQQCCDLSQLWFREFFLEITMGRRIQFP IEMSMPWILTDHILETKEASMMEYVLYSLDLYNDSAHYALTRFNKQ  
FLYDEIEAEVNLCFDQFVYKLADQIFAYYKVMAGSLLLDKRLRSECKNOGATIHLP PPSNRYETLLKQRHVQLLGR  
SIDLNRLITQRVSAAMYKSLELAIGRFESEDLTSIVELDGLLEINRMTHKLLSRYLTLDGFDAMFREANHNVSAP  
YGRITLHVFWELNYDFLPNYCYNGSTNR FVRTVLPFSQEFQ RDKQPNAQPQYLHGSKALNLAYSS IYGSYRNFGV  
PPHFQVICRLLGYQGIAVMEELLKVVKSL LQGTILQYVKTLM EVM PKICRLPRHEYGSPGILEFFHHQLKDIVE  
YAE LKTVCFQNLREVGNAILFC LLIEQSL SLEEVCDLLHAAPFQNILPRVHVKEGERLDAKMKRLESKYAPLHLV  
PLIERLGTPQQIAIAREGDLLTKERLCCGLSMFEVILTRIRSFLDDPIWRGP LPSNGVMHVDECVEFHRLWSAMQ  
FVYCIPVGTHEFTVEQCFGDGLHWAGCMIIVLLGQORRF AVLDFCYHLLKVQKHDGKDEI IKNVPLKKMVERIRK  
FQILNDEIITILD KYL KSGDGEGTPVEHVRCFQPP IHQSLASS

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**FIGURE 4127**

GATCTGTTTGAGGAGATGGTGCCTGTGTCACTGTGGCAGTCTTTGGCTGCCTGTGATCAGAGGAAAGCCGATTG  
TTAACAGATCAATTGCTCAGATGAGAGAAGCCACCACTTTGGCAAATGGAGTGCTAGCTTCCCTTAATCTTCCAG  
CAGCAATTGAAGATGTGTCTGGAGACACTGTACCTCAGTCTATATTGACTAAATCAAGATCTGTGATTGAACAGG  
GAGGCATCCAGACTGTTGATCAGTTGACTAAAGAAGTGCCTGAATTACTGCAATGAAATAGAGAAATCCTAGATG  
AGTCATTAAGGTTTTTGGATGAAGAAGAAGCAACCGATAATGATTTATGAGCAAAATTTAAGGAACGCTGGCAA  
GGACATCATCCAATGAACTGTATAAGCCTTTAAAAGCAGAGGGAACCAGCTTCAGAACAGTTTTAGATAAAGCTG  
TGCAAGCAGATGGACACGTGAAAGAATGTTACCCGTCTCATCGTGACCCCATCGTGCTTTTGTGTAAGCCAGAGC  
CTGAGCTGAATGCTGCCATCCCTTCTGCTAATCCAGCAAAGACCATGCAGGGCAGTGAGGTTGTAATGTCTTAA  
AATCCTTATTGTCAAATCTTGATGAAGTAAAGAAGGAAAGAGAGGGTCTGGAGAATGACTTGAAATCTGTGAATT  
TTGACATGACAAGCAAGTTTTTGACAGCCCTGGCTCAAGATGGCATGATAAATGAAGAAGCTCTTCTGTACTG  
AACTAGATCGAGTCTATGGAGGTCTTACAATAAAGTCCAAGAATCTCTAAAGAAACAGGAGGGACTTCTTAAAA  
ATATTCAGGTCTCACATCAGGAATTTTCGAAAATGAAGCAATCTAATAATGAAGCTAACTTAAGAGAAGAAGTTT  
TGAAGAATTTAGCTACTGCATGTGACAACTTTGTTGAAGTTGTAGCTAATTCGAAGGAAGGCACAAAGTTTTACA  
ATGAGTTGACTGAAATCCTGGTCAGGTTCCAGAACAATGCAGCGATATAGTTTTGGCATGGAAGACAGAAAGAG  
ATGAACTCTTAAAGGCCTGAGACCTGGGAGGAAGCTGGAGAAAAGATGCCCTCTGAATCTTTGTGTTGGCTGCC  
CAGGCTCGCCTTGACACC

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**FIGURE 4128**

MQGSEVVNVLKSLLSNLDEVKKEREGLENDLKSVNFDMTSKFLTALAQDGMINEEALSVTELD R VYGGLTTKVQE  
SLKKQEGLLKNIQVSHQEF SKMKQSNNEANLREEVLKNLATACDNFVELVANSKEGTKFYNELTEILVRFQNKCS  
DIVLAWKTERDELLKA



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**FIGURE 4129**

CCCCAGTGTGAACGATCCCGGGAACATGTCCTTTGTGAAGGAGACGGTGGACAAGCTGTTGAAAGGCTACGACA  
TTCGCCTAAGACCCGACTTCGGGGGTCCCCCGGTCTGCGTGGGGATGAACATCGACATCGCCAGCATCGACATGG  
TTCCGAAGTCAACATGGATTATACCTTAACCATGTATTTTCAACAATATTGGAGAGATAAAAGGCTCGCCTATT  
CTGGGATCCCTCTCAACCTCACGCTTGACAATCGAGTGGCTGACCAGCTATGGGTGCCCGACACATATTTCTTAA  
ATGACAAAAAGTCATTTGTGCATGGAGTGACAGTGAAAAACCGCATGATCCGTCTTCACCCTGATGGGACAGTGC  
TGTATGGGCTCAGAATCACCACGACAGCAGCATGCATGATGGACCTCAGGAGATACCCCTGGACGAGCAGAACT  
GCACTCTGGAATTTGAAAGCTATGGCTACACCACGGATGACATTGAGTTTTACTGGCGAGGCGGGGACAAGGCTG  
TTACCGGAGTGGAAAGGATTGAGCTCCCGCAGTTTCCATCGTGGAGCACCGTCTGGTCTCGAGGAATGTTGTCT  
TCGCCACAGGTGCCTATCCTCGACTGTCACTGAGCTTTCGGTTGAAGAGGAACATTGGATACTTCATTCTTCAGA  
CTTATATGCCCTCTATACTGATAACGATTCTGTCTGGGTGTCTTCTGGATCAATTATGATGCATCTGCTGCTA  
GAGTTGCCCTCGGGATCACAACCTGTGCTGACAATGACAACCATCAACACCCACCTTCGGGAGACCTTGCCCAAAA  
TCCCTATGTCAAAGCCATTGACATGTACCTTATGGGCTGCTTCGTCTTTGTGTTCCCTGGCCCTTCTGGAGTATG  
CCTTTGTCAACTACATTTTCTTTGGAAGAGGCCCTCAAAGGCAGAAGAAGCTTGCAAAAAGACAGCCAAGGCAA  
AGAATGACCGTTCAAAGAGCGAAAGCAACCGGGTGGATGCTCATGGAAATATTCTGTTGACATCGCTGGAAGTTC  
ACAATGAAATGAATGAGGTCTCAGGCGGCATTGGCGATACCAGGAATTCAGCAATATCCTTTGACAACTCAGGAA  
TCCAGTACAGGAAACAGAGCATGCCTCGAGAAGGGCATGGGCGATTCTGGGGGACAGAAGCCTCCCGCACAGA  
AGACCCATCTACGGAGGAGGTCTTCACAGCTCAAAATTAAATACCTGATCTAACCGATGTGAATGCCATAGACA  
GATGGTCCAGGATCGTGTTTCCATTCACTTTTTCTTTTCAACTTAGTTTACTGGCTGTACTATGTAACTGAG  
TGACTGTACTTGATTTTTCAAAGACTTCATTTAACACTGAGTGAAATATTACTCTGCCTGTCAAGTTTTTATACC  
TGTACACACACAGACACACAAGCAGACACACACATATATACATACGCAATTGTATATATATGTGAACTTTCTCAG  
CATATATAT

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**FIGURE 4130**

GAGCAGTGTGAAGAAGAGGCGAGAACGACCCCCGGACCGACCAAAGCCCGCGTCGCCACCGCCACCATGCCCAAG  
AGAAAGGCTGAAGGGGATGCTAAGGGAGATAAAGCCAAGGTGAAGGACGAACCACAGAGAAGATCCGCGAGGTTG  
TCTGCTAAACCTGCTCCTCCAAAGCCAGAGCCCCAAGCCTAAAAAGGCCCTGCAAAGAAGGGAGAGAAGGTACCC  
AAAGGGAAAAAGGGAAAAGCTGATGCTGGCAAGGAGGGGAATAACCCTGCAGAAAATGGAGATGCCAAAACAGAC  
CAGGCACAGAAAGCTGAAGGTGCTGGAGATGCCAAGTGAAGTGTGTGCATTTTTGATAACTGTGTATTTCTGGTG  
ACTGTACAGTTTGAAATACTTTTATCAAGTTTTATAAAAAATGCAGAATTTTGTTTTACTTTTTTTTTTTTTTTT  
TAAGCTATGTTGTTTCGCACACAGAACACTTCATTGTGTGTTTTGGGGGAAGGGGCATATGTCACATAAGAAATGT  
CTCCAAAACCTGGATTGATGTGGAGAAAACACCTTCCCTTCCAGTTTGGAGAGACTTCCTCTGGCTCCCAGGAG  
GAGGGATTCCTTGACTTTGACACACATGGCCACCTTGGCACAAAAGCCTTGTGCTATGGAAAACTCCCTTAAGC  
CCAGACATCTGTTGAGACCTGACCCCTAGTCATTGGTTACCAGTGTGTCAGGCAATCTGGACTTT

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**FIGURE 4131**

MPKRKAEGDTKRDKAKVKDEPQRRSVRLSAKPAPPKPEPKPKKAPAKKGEKVPKGKKGKADAGEEGNNPAENGVA  
KTDQAQKAESPGDAK

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**FIGURE 4132**

GGCGAGAACGACCCCCGGACCGACCAAAGCCCGCGTGCCGCTGCATCCACGTCCAGCACCTACGTCCTGTGCGC  
ACCGCCACCATGCCCCAAGAGAAAGGCTGAAGGGGATGCTAAGGGAGATAAAGCCAAGGTGAAGGACGAACCACAG  
AGAAGATCCGCGAGGTTGTCTGCTAAACCTGCTCCTCCAAAGCCAGAGCCCAAGCCTAAAAAGGCCCTGCAAAG  
AAGGGAGAGAAGGTACCCAAAGGGAAAAAGGGAAAAGCTGATGCCCAGGAGGAGGGATTCTTGACTTTGACACA  
CATGGCCACCTTGGCACAAAAGCCTTGTGCTATGGAAAAACAAATTTGTTTTTATGTCCTCTTCTCCCTTTCCAC  
GTTTCAGCATAGACTTAACTCCCTTAAGCCCAGACATCTGTTGAGACCTGACCCCTAGTCATTGGTTACCAAGTGT  
GTCAGGCAATCTGGACTTTCCAGTGATGCCACTGAGATGGCACCTGTCAAAGAGCAGTGGTTCCATTTCTAGAT  
TGTGGATCTTCAGATAAATTCTGCCATTTTCGTTTCACTTCTGAAAGTCAGGGTTGGCTTGTGAAAAGTTGTTA  
AACAACATGCTAAATGTGAAATGTCAACCCTCACTCTCAACTTTCCCTGTTTCAGAGCATCAGATGAAGACTTCAT  
TGGGTTTTATAGTGGCTTTCTGATTTTTGGTAGTCCATTGAAGAAGGGAGTTTGAAAGTTGTTGTATACTGTTAA  
CGATTGTCTGCCCATGTCCTGCCTGAAATACCA

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**FIGURE 4133**

TTACTACTGATGTGAACAGATTCTGACCTTTGGCTGCGCTAGTTGTTTTTGATAAAATTAACCTTTAGATAATGAT  
GAATGTCTTTGGCCGTTCCCTCAAAAACCTTTGGCTGTTTGAGCAGATGATGGATGTCTAGAAAAACCCCCTGACA  
CTGCAGAGTTTCAGTCGAGAGTTCCAGTTGCACCAGCATCTCTTTGATCCGGAACATGACTATCCAGGCTTGGGCA  
AGTGGACAAGAACTCCTTTACGAGAAGATGAAGGGAGGAGAGAGACGAAAGCGGAGGAGTGTCAATCCATATC  
TACAAGGACAGAGACTGGATAATGTTGTTGCAAAGAAGTCTGTCCCCCATTTTTCAGATGAGGATAAGGATCCAG  
AGTAAAGAGAAGATGCTAGACGAAAACCCACATTACCTGTAGGCCTCAGCATGGCTTATGTGCACGTGTAAATG  
GAGTCCCTGTGAATGACAGCATGTTTCTTACATAGATAATTATGGATACAAAGCAGCTGTATGTAGATAGTGTAT  
TGTCTTCACACCGATGATTCTGCTTTTTTGCTAAATTAGAATAAGAGCTTTTTTGTCTTGGGTTTTTAAATGT  
GAATCTGCAATGATCATAAAAATTAAATGTGAATGTCAACAATAAAAAGCAAGACTATGAAAGGCTCAGATTTT  
TTGCAGTTTAAATGGTGTCTGAGGTTGTACTATTTTGGCCAAGTCTGTAGAAAGCTGTCAATTTGATTTTGATTA  
TGTAGTTCATCCAGCCCTTGGGCATTGTTATACACCAGTAAAGAAGGCTGTACTCAAGAGGAGGAGCTGACACAT  
TTCACCTGGCTGCGTCTTAATAAACATGAATGCAAGCATTGG

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**FIGURE 4134A**

GCGGCCGCACTCAGCGCCACGCGTCGAAAGCGCAGGCCCGGAGGACCCGCCGCACTGACAGTATGAGCCGCACAG  
CCTACACGGTGGGAGCCCTGCTTCTCTCTTGGGGACCCTGCTGCCGGCTGCTGAAGGGAAAAAGAAAGGTCCC  
AAGGTGCCATCCCCCGCCAGACAAGGCCAGCACAACTGACTCAGAGCAGACTCAGTCGCCCCAGCAGCCTGGCT  
CCAGGAACCGGGGGCGGGGCCAAGGGCGGGGCACCTGCCATGCCCGGGGAGGAGGTGCTGGAGTCCAGCCAAGAGG  
CCCTGCATGTGACGGAGCGCAAATACCTGAAGCGAGACTGGTGCAAACCCAGCCGCTTAAGCAGACCATCCACG  
AGGAAGGCTGCAACAGTCGCACCATCATCAACCGCTTCTGTTACGGCCAGTGCAACTCTTCTACATCCCCAGGC  
ACATCCGGAAGGAGGAAGGTTCCCTTTCAGTCCTGCTCCTTCTGCAAGCCCAAGAAATTCCTACCATGATGGTCA  
CACTCAACTGCCCTGAACCTACAGCCACCTACCAAGAAGAAGAGAGTCACACGTGTGAAGCAGTGTGCTTGCATAT  
CCATCGATTTGGATTAAGCCAAATCCAGGTGCACCCAGCATGTCTAGGAATGCAGCCCCAGGAAGTCCCAGACC  
TAAACAACCCAGATTCTTACTTGGCTTAAACCTAGAGGCCAGAAGAACCCCGAGTGCCTCCTGGCAGGAGCCTG  
CTTGTGCGTAGTTCTGTGTGCATGAGTGTGGATGGGTGCCCTGTGGGTGTTTTTAGACACCAGAGAAAACACAGTCT  
CTGCTAGAGAGCACTCCCTATTTTTGTAAACATATCTGCTTTAATGGGGATGTACCAGAAACCCACCTCACCCTGG  
CTCACATCTAAAGGGCGGGGCCGTGCTGCTGCTTCTGACTTTGTGTTTTGTGCCCTCCTGGGGACCAGAATCTC  
CTTTCGGAATGAATGTTTCATGGAAGAGCTCCTCTGAGGGCAAGAGACCTGTTTTAGTGTGCTGCTTCGACATGGA  
AAAGTCCTTTTAACTGTGCTTGCATCCTCCTTTCTCTCTCTCCTCACAATCCATCTCTTCTTAAGTTGATAGT  
GACTATGTCACTCTAATCTCTTGTGTTTGGCAAGGTTCTTAAATTAATTAACCTTAACCATGATGCAAAATGTTTTCA  
TTTTGTGAAGACCCTCCAGACTCTGGGAGAGGCTGGTGTGGGCAAGGACAAGCAGGATAGTGGAGTGAGAAAGGG  
AGGGTGGAGGGTGAGGCCAAATCAGGTCCAGCAAAAGTCAGTAGGGACATTGCAGAAGCTTGAAAGGCCAATACC  
AGAACACAGGCTGATGCTTCTGAGAAAGTCTTTTCTAGTATTTAACAGAACCCCAAGTGAACAGAGGAGAAATGA  
GATTGCCAGAAAGTGATTAACCTTTGGCCGTTGCAATCTGCTCAAACCTAACACCAAACCTGAAACATAAATACTG  
ACCACTCCTATGTTCCGACCCAAAGCAAGTTAGCTAAACCAAAACCAACTCCTCTGCTTTGTCCCTCAGGTGGAAAA  
GAGAGGTAGTTTAGAACTCTCTGCATAGGGGTGGGAATTAATCAAAAACCTCAGAGGCTGAAATTCCTAATACCT  
TTCCTTTATCGTGGTTATAGTCAGCTCATTTCCTATCCACTATTTCCATAATGCTTCTGAGAGCCACTAACTTG  
ATTGATAAAGATCCTGCCCTCTGCTGAGTGTACCTGACAGTAGTCTAAGATGAGAGAGTTTAGGGACTACTCTGTT  
TTAGCAAGAGATATTTTGGGGGTCTTTTTGTTTTAACTATTGTGTCAGGAGATTGGGCTAAAGAGAAGACGACGAGA  
GTAAGGAAATAAAGGGAATTGCCTCTGGCTAGAGAGTAGTTAGGTGTTAATACCTGGTAGAGATGTAAGGGATAT  
GACCTCCCTTTCTTTATGTGCTCACTGAGGATCTGAGGGGACCCTGTTAGGAGAGCATAGCATCATGATGTATTA  
GCTGTTCACTGCTACTGGTTGGATGGACATAACTATTGTAACCTATTGATTTACTGTTAGGCACTGTCCTCT  
GATTAACCTTGGCCTACTGGCAATGGCTACTTAGGATTGATCTAAGGGCCAAAGTGCAGGGTGGGTGAACCTTTAT  
TGACTTTGGATTGGTTAACCTGTTTTCTTCAAGCCTGAGGTTTTATATACAACTCCCTGAATACTCTTTTTG  
CCTTGATCTTCTCAGCCTCCTAGCCAAGTCTATGTAATATGGAAAACAAACACTGCAGACTTGAGATTGAGTT  
GCCGATCAAGGCTCTGGCATTGAGAGAACCTTGCAACTCGAGAAGCTGTTTTTATTTGTTTTGTTTTGATCC  
AGTGCTCTCCCATCTAACAACCTAAACAGGAGCCATTCAAGGCGGGAGATATTTTAAACACCCAAAATGTTGGGT  
CTGATTTTCAAACCTTTTAACTCACTACTGATGATTCTCACGCTAGGCGAATTTGTCCAAACACATAGTGTGTGT  
GTTTTGTATACACTGTATGACCCCAACCAATCTTTGTATTGTCCACATTCTCCAACAATAAAGCACAGAGTGG  
ATTTAATTAAGCACACAAATGCTAAGGCAGAATTTTGAGGGTGGGAGAGAAGAAAAGGGAAGAGCTGAAAATG  
TAAACACACACAGGGAGGAAAAATGACATTGAGAACAGCAAACTGAATTTCTTGTGTTTTAACTCTGTC  
CACAAGATGCAATTTGTTAACGGAGATGACTTAAGTTGGCAGCAGTAATCTTCTTTTAGGAGCTTGATACCACA  
GTCTTGACATAAGTGCAGATTGGCTCAAGTAAAGAGAATTTCTCAACACTAACTTCACTGGGATAATCAGCA  
GCGTAACCTACCTAAAAGCATATCACTAGCCAAAGAGGGAAATATCTGTTCTTCTTACTGTGCCTATATTAAGAC  
TAGTACAAATGTGGTGTGCTTCCAACCTTCATTGAAAATGCCATATCTATACCATATTTTATTCGAGTCACTGA  
TGATGTAATGATATATTTTTTCACTATTATAGTAGAATATTTTTATGGCAAGATATTGTGGTCTTGATCATACC  
TATTAATAATGCCAAACACCAATATGAATTTATGATGTACACTTTGTGCTTGCCATTAAAGAAAAAACA  
CACATCCTGGAAGTCTGTAAGTTGTTTTTGTACTGTAGGTCTCAAAGTTAAGAGTGTAAGTGAATAATCTGG  
AGGAGAGGATAATTTCACTGTGTGGAATGTGAATAGTTAAATGAAAAGTTATGGTTATTTAATGTAATTATTAC  
TTCAATCCTTTGGTCACTGTGATTCAAGCATGTTTTCTTTTTCTCTTTATATGACTTTCTCTGAGTTGGGCA  
AAGAAGAAGCTGACACACCGTATGTTGTTAGAGTCTTTATCTGGTCAGGGGAAACAAAATCTTGACCCAGCTGA  
ACATGCTCTCTGAGTCAGTGCCTGAATCTTTATTTTTAAATTGAATGTTTCTTAAAGGTTAACATTTCTAAAG

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**FIGURE 4134B**

CAATATTAAGAAAGACTTTAAATGTTATTTTGAAGACTTACGATGCATGTATACAAACGAATAGCAGATAATGA  
TGACTAGTTCACACATAAAGTCCTTTTAAGGAGAAAATCTAAAATGAAAAGTGGATAAACAGAACATTTATAAGT  
GATCAGTTAATGCCTAAGAGTGAAAGTAGTTCTATTGACATTCCTCAAGATATTTAATATCAACTGCATTATGTA  
TTATGTCTGCTTAAATCATTAAAAACGGCAAAGAATTATATAGACTATGAGGTACCTTGCTGTGTAGGAGGATG  
AAAGGGGAGTTGATAGTCTCATAAACTAATTTGGCTTCAAGTTTCATGAATCTGTAAGTAAATTTAATTTTCA  
CCCCAATAATGTTCTATATAGCCTTTGCTAAAGAGCAACTAATAAATTAAACCTATTCTTTTC

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**FIGURE 4135**

CTTTCTGTGCCGATAACGCTCACGCAAGCATGGTTAACGTCCCTAAAACCCGCCGGACTTTCTGTAAGAAGTG  
GCAAGCACCAACCCATAAAGTGACACAGTACAAGAAGGGCAAGGATTCTCTGTATGCCCAGGGAAAGCGGCGTT  
ATGACAGGAAGCAGAGTGGCTATGGTGGGCAACTAAGCCAATTTCTGGAAAAAGGCTAAACTACAAAGATTG  
TGCTAAGGCTTGAGTGCATTGAGCCCAACTGCAGATCTAAGAGAATGCTGGCTATTAAAAGATGCAAGCATTG  
AACTGGGAGGAGATAAGAAGAGAAAGGGCCAAGTGATTCAGTTCTAAGTGTCATCTTTATTATGAAGACAATAA  
AATCTTGAGTTTATGTTT



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**FIGURE 4136**

AGGAGGAGGAGGAAGATCAGGAGGAGGAGGAAGAAGAGGAAAAAGAGAAAAAGAGAAATATCACAGAAAAAA  
AATTCTTCGTTGTCTAGACTGGGCITTTTTTCCCCCTAAAAATAGCATATTGGAGAATTGGGAGAAGTCTCTT  
TGGTTTGGAAAAAAGGAATCTTCAGCCTAGATCACTTTCTTATCCGGACTGGGATATTAAATATACGAC  
ACATCCAGGAGTTTATTGGAGCGCAGACTGATGCGCAAAGGTACGATGAGCTGCCCCATTACGGCGGGATGGAC  
GGAGTAGGGTTCCCGCTTCCATGTACGGAGACCCTCACGCGCGCGGCGGATCCCCCGGTTCCACCCTGAAC  
CACGGGCCCGCTCCACGCCACACAGCACTACGGCGCGCACGCCCCGACCCCAATGTCTATGCCGGCCAGTATG  
GGATCCGCTGTCAACGACGCTTGAAGCGGGACAAGGACGCGATCTATGGGCACCCGTTGTTTCTCTGTTAGCT  
CTGGTCTTTGAGAAGTGCAGCTGGCGACCTGCACTCCCCGGGAACCTGGAGTGGCTGGCGGAGACGTCTGCTCC  
TCCGACTCCTTCAACGAGGACATCGCGGTCTTCGCCAAGCAGGTTTCGCGCCGAAAAGCCACTTTTTTCTCAAA  
CCAGAGCTGGACAATTTGATGATACAAGCAATACAAGTACTAAGGTTTCATCTTTTGGAGTTAGAAAAGGTCCAC  
GAACTGTGCGATAACTTCTGCCACCGATACATTAGCTGTTTGAAGGGGAAAATGCCCATCGACCTCGTCATTGAT  
GAAAGAGACGGCAGCTCCAAGTCAGATCATGAAGAACTTTAGGCTCCTCCACAAATCTCGCTGACCATAACCCCT  
TCTTCTTGGCGAGACCAGATGATGAACCTCAACCCACTCAGCAGGCACCCAGGGCCCTCCAGTGGGGGCCAT  
GCTTCCCAGAGCGGAGACAACAGCAGTGAGCAAGGGGATGGTTTAGACAACAGTGTAGCTTCACCTGGTACAGGT  
GACGATGATGATCCGGATAAGGACAAAAACGCCAGAAGAAAAGAGGCATTTTCCCCAAAGTAGCAACAAATATC  
ATGAGAGCATGGCTCTTCCAGCATCTCACAGTTTATTAATGCCAGAAGAAGAATAGTACAGCCCATGATTGACCA  
GTCAAAATCGAGCAGTGAGCCAAGGAGCAGCATATAGTCCAGAGGGTCAGCCCATGGGGAGCTTTGTGTTGGATGG  
TCAGCAACACATGGGGATCCGGCCTGCAGGACCTATGAGTGGATGGGCATGAATATGGGCATGGATGGGCAATG  
GCACTACATGTAACCTTCATCATGTAAAGCAATCGCAAGCAAGGGGGAAGTTTGCAGAGCATGCCAGGGGACTA  
CGTTTCTCAGGGTGGTCTATGGGAATGAGTATGGCACAGCCAAGTTACACTCCTCCCCAGATGACCCACACCC  
TACTCAATTAAGACATGGACCCCAATGCATTATTTGCCAAGCCATCCCCACCCAGCCATGATGATGCA  
CGGAGGACCCCTACCCACCTGGAATGACTATGTCAGCACAGAGCCCAATGTTAAATTTCTGTAGATCCCAA  
TGTTGGCGGACAGGTTATGGACATTCATGCCCAATAGTATAAGGGAACCAAGGGAAAAGGAAACACACGCAAAA  
ACTATTTTAAGACTTTCTGAACCTTGACCAGATGTTGACACTTAATATGAAATTCAGACAGCTGTGATTATTT  
TTACTTTTGTCAATTTTTCATCAAGCAACAGAGGACCAATGCAACAAGAACACAAATGTGAAATCATGGGCTGACT  
GAGACAATTCGTCCATGTAAAGATCCTCTGGAAGAAAGACTCCGAGAGTTATAACTACTGTAGTATAAATATAGG  
AACTAAGTTAACTTTGTACATTTCTGTTGATCACGCCGTTATGTTGCCTCAAATAGTTTGAAGAGAAAAAAA  
ATATATCCTTGTTTTCCACACTATGTGTGTTGTTCCCAAGAAATGACTGTTTGGTTCATCAGTGAATTCACCA  
TCCAGGAGAGACTGTGGTATATATTTAAACCTGTTGGGCCAATGAGAAAAGAACCACACTGGAGATCATGATGA  
ACTTTTGGCTGAACCTCATCACTCGAACTCCAGCTTCAGAATGTGTTTTCATGCCCGGCCTTTGTTCCCTCCATA  
ATGTGTCCTTTAGTTTCAAACAGATCTTTATAGTTCGTGCTTCATAAGCCAATTCTTATTATTTTTTGGGGGA  
CTCTTCTTCAAAGAGCTTGCCAATGAAGATTTAAAGACAGAGCAGGAGCTTCTTCCAGGAGTCTGAGCCTTGGT  
TGTGGACAAAACAATCTTAAGTTGGGCAGCTTCTCAACACAAAAAAGTTATTAATGGTCATTGAACCATAA  
CTAGGACTTTATCAGAACTCAAAGCTTGGGGGATAAAAAGGAGCAAGAGAATACTGTAAACAACTTCGTACAGA  
GTTCCGCTCTATTAATTGTTTCATGTTAGATATTTCTATGTGTTTACCTCAATTGAAAAAAAAGAAATGTTTTGC  
TAGTATCAGATCTGCTGTGGAATTGGTATTGTATGTCCATGAATTCTTTTTCTCAGCACGTGTTCTCTACTAG  
AAGAAAATGCTGTTACCTTTAAGCTTTGTCAAATTTACATTAAATACTTGTATGAGGACTGTGACGTTATGTT

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**FIGURE 4137**

MAQRYDELPHYGGMDGVGVPASMYGDPHAPRP IPPVHHLNHGPPLHATQHYGAHAPHNPVMPASMGSAVNDALKR  
DKDAIYGHPLFP LLALVF EKCELATCTPREPGVAGGDVCSSDSFNEDI AVFAKQVRAEKPLFSSNPELDNLMIQA  
IQVLRFHLLLELEKVHELCDNFCHRYISCLKGKMPIDLVIDERDGSSKSDHEELSGSSTNLADHNPSSWRDHDDAT  
STHSAGTPGPSSGGHASQSGDNSSEQDGLDNSVASPGTGDDDDPDKDKKRQKKRGIFPKVATNIMRAWLFQHLT  
VY

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**FIGURE 4138A**

GGACGCACAGGCATTCCCCGCGCCCCCTCCAGCCCTCGCCGCCCTCGCCACCGCTCCCGGCCGCCGCGCTCCGGTA  
CACACAGGATCCCTGCTGGGCACCAACAGCTCCACCATGGGGCTGGCCTGGGGACTAGGCGTCCTGTTCTTGATG  
CATGTGTGTGGCACCAACCGCATTCCAGAGTCTGGCGGAGACAACAGCGTGTTTGACATCTTTGAACTCACCGGG  
GCCGCCCGCAAGGGGTCTGGGCGCCGACTGGTGAAGGGCCCCGACCCTTCCAGCCCAGCTTTCCGCATCGAGGAT  
GCCAACCTGATCCCCCTGTGCCTGATGACAAGTTCCAAGACCTGGTGGATGCTGTGCGGGCAGAAAAGGGTTTC  
CTCCTTCTGGCATCCCTGAGGCAGATGAAGAAGACCCGGGGCAGCTGCTGGCCCTGGAGCGGAAAGACCACTCT  
GGCCAGGTCTTCAGCGTGGTGTCCAATGGCAAGGCGGGCACCCTGGACCTCAGCCTGACCGTCCAAGGAAAGCAG  
CACGTGGTGTCTGTGGAAGAAGCTCTCCTGGCAACCGGCCAGTGAAGAGCATCACCTGTTTTGTGACGGAAGAC  
AGGGCCCAGCTGTACATCGACTGTGAAAAGATGGAGAATGCTGAGTTGGACGTCCCCATCCAAAGCGTCTTCACC  
AGAGACCTGGCCAGCATCGCCAGACTCCGCATCGCAAAGGGGGCGTCAATGACAATTTCCAGGGGGTGTGTCAG  
AATGTGAGGTTTGTCTTTGGAACCACACCAGAAGACATCCTCAGGAACAAAGGCTGCTCCAGCTCTACCACTGTC  
CTCCTCACCTTGACAACAACGTGGTGAATGGTTCAGCCCTGCCATCCGCACTAACTACATTGGCCACAAGACA  
AAGGACTTGAAGCCATCTGCGGCATCTCCTGTGATGAGCTGTCCAGCATGGTCTGGAATCAGGGGCTGCGC  
ACCATTTGTGACCACGCTGACAGGACAGCATCCGCAAGTGACTGAAGAGAACAAGAGTTGGCCAATGAGCTGAGG  
CGGCCTCCCTATGCTATCACAACGAGTTTCACTACAGAAATAACGAGGAATGGACTGTTGATAGCTGCACTGAG  
TGTCATGTGCAACTCAGTTACCATCTGCAAAAAGTGTCTGCCCCATCATGCCCTGCTCCAATGCCACAGTT  
CCTGATGGAGAATGCTGTCTCGTGTGGCCAGCGACTCTGCGGACGATGGCTGGTCTCCATGGTCCGAGTGG  
ACCTCCTGTTCTACGAGCTGTGGCAATGGAATTCAGCAGCGCGGCCGCTCCTGCGATAGCCTCAACAACCGATGT  
GAGGGCTCCTCGGTCCAGACACGGACCTGCCACATTAGGAGTGTGACAAGAGATTTAAACAGGATGGTGGCTGG  
AGCCACTGGTCCCGTGGTTCATCTTGTCTGTGACATGTGGTGATGGTGTGATCACAAGGATCCGGCTCTGCAAC  
TCTCCCAGCCCCAGATGAACGGGAAACCTGTGAAGGCGAAGCGCGGGAGACCAAAGCCTGCAAGAAAGACGCC  
TGCCCCATCAATGGAGGCTGGGGTCTTGGTACCATGGGACATCTGTTCTGTACCTGTGGAGGAGGGGTACAG  
AAACGTAGTCGTCTCTGCAACAACCCACACCCCACTTTGGAGGCAAGGACTGCGTTGGTGTGTAACAGAAAAC  
CAGATCTGCAACAAGCAGGACTGTCCAATTGATGGATGCCTGTCCAATCCCTGCTTTGCCGGCGTGAAGTGTACT  
AGCTACCCTGATGGCAGCTGGAATGTGGTGTCTGCCCCCTGGTTACAGTGGAAATGGCATCCAGTGCACAGAT  
GTTGATGAGTGCAAGAAGTGCCTGATGCCTGCTTCAACCACAATGGAGAGCACCGGTGTGAGAACACGGACCCC  
GGCTACAACCTGCCCTGCCCTGCCCCCACGCTTCACCGGCTCACAGCCCTTCGGCCAGGGTGTGCAACATGCCACG  
GCCAACAAACAGGTGTGCAAGCCCCGTAAACCCCTGCACGGATGGGACCCACGACTGCAACAAGAACGCCAAGTGC  
AACTACCTGGGCCACTATAGCGACCCCATGTACCGCTGCGAGTGCAAGCCTGGCTACGCTGGCAATGGCATCATC  
TGCGGGGAGGACACAGACCTGGATGGCTGGCCCAATGAGAACCTGGTGTGCGTGGCCAATGCGACTTACCACTGC  
AAAAAGGATAATTGCCCCAACCTTCCCAACTCAGGGCAGGAAGACTATGACAAGGATGGAATTTGGTGTGCTGT  
GATGATGACGATGACAATGATAAAATTCAGATGACAGGGACAACCTGTCCATTCCATTACAACCCAGCTCAGTAT  
GACTATGACAGAGATGATGTGGGAGACCGCTGTGACAACCTGTCCCTACAACCACAACCCAGATCAGGCAGACACA  
GACAACAATGGGGAAGGAGACGCCTGTGCTGCAGACATTGATGGAGACGGTATCCTCAATGAACGGGACAACCTGC  
CAGTACGTCTACAATGTGGACCAGAGAGACACTGATATGGATGGGGTTGGAGATCAGTGTGACAATTGCCCTTG  
GAACACAATCCGGATCAGCTGGACTCTGACTCAGACCGCATTGGAGATACCTGTGACAACAATCAGGATATTGAT  
GAAGATGGCCACCAGAACAACTCTGGACAACCTGTCCCTATGTGCCCAATGCCAACCAGGCTGACCATGACAAAGAT  
GGCAAGGGAGATGCCTGTGACCACGATGATGACAACGATGGCATTCTGATGACAAGGACAACCTGCAGACTCGTG  
CCCAATCCCGACCAGAAGGACTCTGACGGCGATGGTTCGAGGTGATGCCTGCAAAGATGATTTTGACCATGACAGT  
GTGCCAGACATCGATGACATCTGTCTGAGAATGTTGACATCAGTGAGACCGATTTCGCGCGATTCCAGATGATT  
CCTCTGGACCCCAAAGGGACATCCCAAAATGACCCTAACTGGGTGTGACGCCATCAGGGTAAAGAACTCGTCCAG  
ACTGTCAACTGTGATCTCTGGACTCGCTGTAGGTATGATGAGTTTAAATGCTGTGGACTTCAGTGGCACCTTCTTC  
ATCAACACCGAAAGGGACGATGACTATGCTGGATTTGTCTTTGGCTACCAGTCCAGCAGCCGCTTTTATGTTGTG  
ATGTGGAAGCAAGTCACCCAGTCTTACTGGGACCAACCCACGAGGGCTCAGGGATACTCGGGCTTTCTGTG  
AAAGTTGTAAACTCCACCACAGGGCCTGGCGAGCACTGCGGAACGCCCTGTGGCACACAGGAAACACCCCTGGC  
CAGGTGCGCACCTGTGGCATGACCCTCGTCACATAGGCTGGAAAGATTTACCGCCTACAGATGGCGTCTCAGC  
CACAGGCCAAAGACGGGTTTCATTAGAGTGGTGTATGAAGGGAAGAAAATCATGGCTGACTCAGGACCCATC  
TATGATAAAACCTATGCTGGTGGTAGACTAGGGTGTGTTGTCTCTCTCAAGAAATGGTGTCTTCTCTGACCTG

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**FIGURE 4138B**

AAATACGAATGTAGAGATCCCTAATCATCAAATTGTTGATTGAAAGACTGATCATAAACCAATGCTGGTATTGCA  
CCTTCTGGAACATATGGGCTTGAGAAAACCCCCAGGATCACTTCTCCTTGGCTTCCTTCTTTCTGTGCTTGCATC  
AGTGTGGACTCCTAGAACGTGCGACCTGCCTCAAGAAAATGCAGTTTTCAAAAACAGACTCAGCATTTCAGCCTCC  
AATGAATAAGACATCTTCCAAGCATATAAACAATTGCTTTGGTTTTCTTTTGAAAAAGCATCTACTTGCTTCAGT  
TGGAAGGTGCCATTCCACTCTGCCTTTGTACAGAGCAGGGTGCTATTGTGAGGCCATCTCTGAGCAGTGGAC  
TCAAAAGCATTTCAGGCATGTGAGAGAAGGGAGGACTCACTAGAATTAGCAAACAAAACCACCTGACATCCTC  
CTTCAGGAACACGGGGAGCAGAGGCCAAAGCACTAAGGGGAGGGCGCATACCCGAGACGATTGTATGAAGAAAAT  
ATGGAGGAACGTGTACATGTTCCGGTACTAAGTCATTTTCAGGGGATTGAAAGACTATTGCTGGATTTTCATGATGC  
TGAATGGCGTTAGCTGATTAAACCATGTAAATAGGCCTTAAATAGAAGCAGGAAAGGGAGACAAAGACTGGCTT  
CTGGACTTCCTCCCTGATCCCCACCCTTACTCATCCTGCAGTGGCCAGAATTAGGGAATCAGAATCAAACCAG  
TGTAAGGCAGTGTGCTGCCATTGCCTGGTCACATTGAAATTGGTGGCTTCATTCTAGATGTAGCTTGTGCAGA  
TGTAAGCAGGAAAAATAGGAAAACCTACCATCTCAGTGAGCACCAGCTGCCCTCCCAAAGGAGGGGCGAGCCGTGCTTA  
TATTTTTATGTTACAATGGCACAATAATTATTATCAACCTAACTAAAACATTCTTTTTCTCTTTTTCTCTGAATT  
ATCATGGAGTTTTCTAATTCTCTCTTTTTGGAATGTAGATTTTTTTTTAAATGCTTTACGATGTAAAAATATTTATTT  
TTTACTTATTCTGGAAGATCTGGCTGAAGGATTATTCATGGAACAGGAAGAAGCGTAAAGACTATCCATGTCATC  
TTTGTTGAGAGTCTTCGTGACTGTAAGATTGTAAATACAGATTATTTATTAACCTCTGTTCTGCCTGGAAATTTAG  
GCTTCATACGGAAAGTGTGTTGAGAGCAAGTAGTTGACATTTATCAGCAAATCTCTTGCAAGAACAGCACAAGGAA  
AATCAGTCTAATAAGCTGCTCTGCCCTTGTGCTCAGAGTGGATGTTATGGGATTCTTTTTTCTCTGTTTTATC  
TTTTCAAGTGGAATTAGTTGGTTATCCATTGCAAATGTTTTAAATTGCAAAGAAAGCCATGAGGTCTTCAATAC  
TGTTTTACCCCATCCCTTGTGCATATTTCCAGGGAGAAGGAAAGCATATACACTTTTTTCTTTTCATTTTTCCAAA  
AGAGAAAAAATGACAAAAGGTGAACTTACATACAAATATTACCTCATTGTTGTGTGACTGAGTAAAGAATTT  
TTGGATCAAGCGGAAAGAGTTTAAGTGTCTAACAACTTAAAGCTACTGTAGTACCTAAAAAGTCAGTGTGTGAC  
ATAGCATAAAACTCTGCAGAGAAGTATCCCAATAAGGAAATAGCATTGAAATGTTAAATACAATTTCTGAAAG  
TTATGTTTTTTTTCTATCATCTGGTATACCATTGCTTTATTTTTATAAATTATTTTCTCATTGCCATTGGAATAG  
ATATCTCAGATTGTGTAGATATGCTATTTAAATAATTTATCAGGAAATACTGCCTGTAGAGTTAGTATTTCTATT  
TTTATATAATGTTTGCACACTGAATTGAAGAATTGTTGGTTTTTTCTTTTTTTTGTGTTTTGTTTTTTTTTTTT  
TTTTTTGCTTTTGACCTCCCATTTTTTACTATTTGCCAATACCTTTTTCTAGGAATGTGCTTTTTTTTGTACACAT  
TTTTATCCATTTTACATTCTAAAGCAGTGTAAAGTTGTATATTACTGTTTCTTATGTACAAGGAACAACAATAAAT  
CATATGGAAATTTATATT

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**FIGURE 4139A**

GT TTGTTAGGGAGTCGTGTGCGTGCCTTGGTCGCTTCTGTAGCTCCGAGGGCAGGTTGCGGAAGAAAGCCCAGGC  
GGTCTGTGGCCAGAGGAAAGGCCTGCAGCAGGACGAGGACCTGAGCCAGGAATGCAGGATGCGCGCGGTGAAGA  
AGGAAGGGGGTGCTCTGAGTGAAGCCATGTCCCTGGAGGGAGATGAATGGGAAGTGAAGTAAAGAAATGTACAAC  
CTTTAAGGCAAGGGCGGATCATGTCCACGCTTCAGGGAGCACTGGCACAAGAATCTGCCTGTAACAATACTCTTC  
AGCAGCAGAAACGGGCATTTGAATATGAAATTCGATTTTACACTGGAAATGACCCCTCTGGATGTTTGGGATAGGT  
ATATCAGCTGGACAGAGCAGAACTATCCTCAAGGTGGGAAGGAGAGTAATATGTCAACGTTATTAGAAAGAGCTG  
TAGAAGCACTACAAGGAGAAAAACGATATTATAGTGATCCTCGATTTCTCAATCTCTGGCTTAAATTAGGGCGTT  
TATGCAATGAGCCTTTGGATATGTACAGTTACTTGCACAACCAAGGGATTGGTGTTCCTTGGCTCAGTTCTATA  
TCTCATGGGCAGAAGAATATGAAGCTAGAGAAAACCTTTAGGAAAGCAGATGCGATATTTAGGAAGGGATTCAAC  
AGAAGGCTGAACCACTAGAAAGACTACAGTCCCAGCACCGACAATTCCAAGCTCGAGTGTCTCGGCAAACTCTGT  
TGGCACTTGAGAAAAGAAGAGAGGAGGAAGTTTTGAGTCTTCTGTACCACAACGAAGCACACTAGCTGAACATA  
AGAGCAAAGGGAAAAAGACAGCAAGAGCTCCAATCATCCGTGTAGGAGGTGCTCTCAAGGCTCCAAGCCAGAACA  
GAGGACTCCAAAATCCATTTCTCAACAGATGCAAAAATAATAGTAGAATTACTGTTTTGATGAAAATGCTGATG  
AGGCTTCTACAGCAGAGTTGTCTAAGCCTACAGTCCAGCCATGGATAGCACCCCCCATGCCAGGGCCAAAGAGA  
ATGAGCTGCAAGCAGGCCCTTGGAACACAGGCAGGTCTTGGAACACAGGCCTCGTGGCAATACAGCTTCACTGA  
TAGCTGTACCCGCTGTGCTTCCAGTTTCACTCCATATGTGGAAGAGACTGCACAACAGCCAGTTATGACACCAT  
GTAAAATTGAACCTAGTATAAACCACATCCTAAGCACCAGAAAGCCTGGAAAGGAAGAAGGAGATTCTCTACAAA  
GGGTTCAGAGCCATCAGCAAGCGTCTGAGGAGAAGAAAGAGAAGATGATGTATTGTAAGGAGAAGATTTATGCAG  
GAGTAGGGGAATTTCTCTTTGAAGAAATTCGGGCTGAAGTTTTCCGGAAGAAATTAAGAGAGCAAAGGGAAGCCG  
AGCTATTGACCACTGCAGAGAAGAGAGCAGAAATGCAGAAACAGATTGAAGAGATGGAGAAGAAGCTAAAAGAAA  
TCCAACTACTCAGCAAGAAAGAACAGGTGATCAGCAAGAAGAGACGATGCCTACAAAGGAGACAATAACTGC  
AAATTGCTTCCGAGTCTCAGAAAATACCAGGAATGACTCTATCCAGTTCTGTTGTCAAGTAACTGTTGTGCCA  
GAGAACTTCACTTGGCGAGAACATTTGGCAGGAACAACCTCATTCTAAAGGTCCCAGTGACCTTTCTCCATTT  
TTGATGAGTTTCTTCTTTAGAAAAGAAGATAAAAGTCTCTGAGATCCCCACGAGTTTAGCTCAACGAA  
GACCCCTTGCACTTCTCAAAACCTCAGAAAGCATCACCTCAAATGAAGATGTGTCTCGAGATGTTTGTGATGAAT  
TTACAGGAATTGAACCCCTTGAGCGAGGATGCCATTATCACAGGCTTCAGAAATGTAACAATTTGTCTTAACCCAG  
AAGACACTTGTGACTTTGCCAGAGCAGCTCGTTTTGTATCCACTCCTTTTCATGAGATAATGTCCTTGAAGGATC  
TCCCTTCTGATCCTGAGAGACTGTTACCGGAAGAAGATCTAGATGTAAAGACCTCTGAGGACCAGCAGACAGCTT  
GTGGCACTATCTACAGTCAGACTCTCAGCATCAAGAAGCTGAGCCCAATTATTGAAGACAGTCGTGAAGCCACAC  
ACTCCTCTGGCTTCTCTGGTTCTTCTGCCTCGGTTGCAAGCACCTCCTCCATCAAATGTCTTCAAATTCCTGAGA  
AACTAGAATTACTAATGAGACTTCAGAAAACCTACTCAGTCACCATGGTGTTTACAGTATCGCAGACAGCTAC  
TGAAGTCCCTACCAGAGTTAAGTGCCCTCTGCAGAGTTGTGTATAGAAGACAGACCAATGCCTAAGTTGGAAATTG  
AGAAGGAAATTGAATTAGGTAATGAGGATTACTGCATTAAACGAGAAATACCTAATATGTGAAGATTACAGTTAT  
TCTGGGTGGCGCAAGAACTCTGCAGAATTAACAGTAATAAAGGTATCTTCTCAACCTGTCCCATGGGACTTTT  
ATATCAACCTCAAGTTAAAGGAACGTTTAAATGAAGATTTTGATCATTTTTGCAGCTGTTATCAATATCAAGATG  
GCTGTATTGTTTGGCACCAATATATAAACTGCTTACCCTTCAGGATCTTCTCAACACAGTGAATATATTACCC  
ATGAAATAACAGTGTGATTATTTATAACCTTTTGACAATAGTGGAGATGCTACACAAAGCAGAAATAGTCCATG  
GTGACTTGAGTCCAAGGTGTCTGATTCTCAGAAACAGAAATCCACGATCCCTATGATTGTAACAAGAACAATCAAG  
CTTTGAAGATAGTGACTTTTCTACAGTGTTGACCTTAGGGTGCAGCTGGATGTTTTTACCCTCAGCGGCTTTC  
GGACTGTACAGATCCTGGAAGGACAAAAGATCCTGGCTAACTGTTCTTCTCCCTACCAGGTAGACCTGTTTGGTA  
TAGCAGATTTAGCACATTTACTATTGTTCAAGGAACACCTACAGGTCTTCTGGGATGGGTCTTCTGGAACCTTA  
GCCAAATATTTCTGAGCTAAAAGATGGTGAATTGTGGAATAAATCTTTGTGCGGATTCTGAATGCCAATGATG  
AGGCCACAGTGTCTGTTCTTGGGGAGCTTGACAGCAGAAATGAATGGGGTTTTTGACACTACATTCCAAAGTCACC  
TGAACAAAGCCTTATGGAAGGTAGGAAGTTAACTAGTCTGGGGCTTGTCTTTTCACTGAGCTAGGCAATCAA  
GTCTCACAGATTGCTGCCTCAGAGCAATGGTTGTATTGTGGAACACTGAACTGTATGTGCTGTAATTTAATTTA  
GGACACATTTAGATGCACTACCATGCTGTTCTACTTTTTTGGTACAGGTATATTTTACGTCAGTATATTTTTT  
ATACAGTGATATACTTACTCATGGCCTTGTCTAACTTTTGTGAAGAACTATTTTATTCTAAACAGACTCATTACA  
AATGGTTACCTTGTTATTTAACCATTGTCTCTACTTTTCCCTGTACTTTTCCATTGTAATTTGTAAATGT



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**FIGURE 4140**

MAAVKKEGGALSEAMSLEGDEWELSKENVQPLRQGRIMSTLQGALAQESACNNTLQQQKRAFYEYIRFYTGNDPL  
DVWDRYISWTEQNYPPQGGKESNMSTLLERAVEALQGEKRYYSDFRFLNLWLKLGRLCNEPLDMYSYLHNQGIGVS  
LAQFYISWAEYEARENFRKADAIHQEGIQKAEPLERLQSQRQFQARVSRQTLLEKEEEEEVFESSVPQRS  
TLAELKSKGKKTARAPIIRVGGALKAPSONRGLQNPFPQQMQNNSRITVFDENADEASTAELSKPTVQPIAPPM  
PRAKENELQAGPWNTGRSLEHRPRGNTASLIAVPAVLPSFTPYVEETAQQPVMTPECKIEPSINHILSTRKPGKEE  
GDSLQRVQSHQQASEEKKEKMMYCKEKIYAGVGEFSFEEIRAEVFRKKLKEQREAELLTSAEKRAEMQKQIEEME  
KKLKEIQTTQQERTGDQQEETMPTKETTKLQIASSESQKIPGMTLSSSVQVNCARETSLAENIWQEQPHSKGPS  
VPFSIFDEFLLEKKNKSPPADPPRVLAQRRPLAVLKTSESITSNEDVSPDVCDEFTGIEPLSEDAIITGFRNVT  
ICPNPEDTCDFARAARFVSTPFHEIMSLKDLPSDPERLLPEEDLDVKTSQDQACGTIYSQTLSEIKKLSPIED  
SREATHSSGSGSSASVASTSSIKCLQIPEKLELTNETSENPTQSPWCSQYRRQLLKSLELSASAELCIEDRPM  
PKLEIEKEIELGNEDYCIKREYLICEDYKLFVWVAPRNSAELTVIKVSSQPVWDFYINLKLKERLNEDFDHFCSC  
YQYQDGCIVWHQYINCFTLQDLLQHSEYITHEITVLIINYLLTIVEMLHKAIEIVHGDLSRCLILRNRIHDPYDC  
NKNQALKIVDFSYSVQLRVQLDVFTLSGFRVQILEGQKILANCSSPYQVDLFGIADLAHLLLFKEHLQVFWDG  
SFWKLSQNISELKDGELWNKFFVRILNANDEATVSVLGELAAEMNGVFDTTFQSHLNKALWKVGKLTSPGALLFQ

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## FIGURE 4141A

CAGCCAGGGCCACCCAGGGGCTATAAGAGCAACTAGATTTCTGGAGCAGCTCGGGGATGGGTGCCATTTGAGCC  
CAGCTTGGCTCCCCCTCCTGGCTGGCCTCCTTCTGCCCCTTCTGCTGCTGTGTCTGCTGAGATTCTGCAAAGA  
GGAACGTTGGCACCATGTCTCTGCTCAACCCCTGCTGCTGCCCCCAAGGTGAAGGCCTATCTGAGCCAAGGGG  
AGCGCTTCATCAAATGGGATGATGAAACTACAGTTGCCTCTCCAGTTATCCTCCGTGTGGATCCTAAGGGCTACT  
ACTTATACTGGACGTATCAAAGTAAGGAGATGGAGTTTCTGGATATCACCAGCATCCGGGATACTCGCTTTGGGA  
AGTTTGCCAAGATGCCCAAGAGCCAGAAGCTCCGGGACGTCTTCAACATGGACTTTCCTGATAACAGTTTCTGCTG  
TGAAGACACTCACGGTGGTGTCCGGCCCCGACATGGTGGACCTCACCTTCCACAACCTTCGTCTCTACAAGGAGA  
ACGTGGGCAAGGCCTGGGCTGAGGACGTACTGGCCCTAGTCAAACATCCGCTGACGGCCAACGCCTCCCGCAGCA  
CCTTCTGGACAAGATCCTTGTGAAGCTCAAGATGCAGCTCAACTCTGAAGGGAAGATTCCGGTGAAGAACTTTT  
TCCAGATGTTTTCTGCTGACCGCAAGCGGGTGAAGCTGCTCTCAGTGCCTGCCACCTCCCCAAAGGCCAAAATG  
ACGCCATCAATCTGAGGACTTCCCAGAACCTGTCTACAAGAGTTTCTCATGAGCCTCTGTCTCGGCCAGAAA  
TAGATGAGATCTTCACTTCTTACCATGCTAAGGCCAAACCTACATGACGAAGGAGCACCTGACCAAATTTCATCA  
ACCAGAAACAGCGGGACTCCCGGCTTAACCTCCCTGCTGTTCCTGCCAGCACGGCCTGACCAGGTGCAGGGCCTCA  
TCGACAAGTATGAGCCCAGTGGCATCAATGCACAGAGGGGCCAGCTGTCACCTGAAGGCATGGTCTGGTTTCTCT  
GTGGGCCAGAGAACAGCGTGTCTGGCCAGGACAAGCTGCTGCTCCACCAGCATGACGCAGCCACTCAATCATT  
ACTTCATCAACTCGTCCCAACACCTACCTGACAGCCGGCCAGTTCTCAGGCCTCTCCTCGGCTGAGATGTACC  
GCCAGGTGCTGCTCTCTGGCTGCCGTTCGCTGGAGCTAGACTGCTGGAAGGGGAAACCCCTGACGAGGAGCCCA  
TTATACCCATGGCTTACCATGACCACAGACATCTTCTTCAAAGAAGCAATTGAGGCTATTGCAGAAAGTGCTT  
TTAAGACCTCCCCATATCCCATATCTGTCTGTTGAGAACCATGTGGACTCACCCCGCCAGCAGGCTAAGATGG  
CTGAGTATTGCCGACGATCTTTGGGGATATGCTGCTCACAGAGCCCCTGGAAGTTCCCACTAAAACAGGTG  
TCCCCCTGCCAGCCCTGAGGATCTCAGGGGCAAGATCCTCATCAAGAACAAGAAGAACAGTTTCTGGCCCCA  
CCTCTCCAGTAAGGATACCGGTGGGGAGGCTGAGGGCAGCAGCCACCCAGTGGCCCTGCAGTGTGGGCTGGCG  
AGGAAGGGACTGAGCTGGAGGAGGAGGAGGTGGAAGAGGAAGAGGAGGAGGAGTCAAGAAACCTGGATGAAGAAG  
AGATTAAAGAAGATGCAGTCGGATGAGGGCACAGCGGGCTGGAAGTGACGGCTTATGAGGAGATGTCCAGCCTAG  
TCAATTACATCCAGCCCACCAAGTTCTGCTCTCTTGTAGTTCTCTGCCCCAAAGAACCAGTTATGTCTATCTCGT  
CCTTCACAGAGCTCAAGGCATATGACCTGCTCTCAAGGCCTCGGTGCAGTTTGTGGACTACAACAAGCGCCAGA  
TGAGCCGCATTTACCCCAAGGGAACCCGCATGGACTCTCCAACCTACATGCCCCAGATGTTCTGGAATGCTGGAT  
GCCAGATGGTTGCCCTCAACTTCCAGACGATGGACTTGGCCATGCAGCAGAACATGGCAGTATTGTAGTTCAACG  
GGCAGAGCGGCTACCTCCTCAAGCATGAGTTTCATGCGCCGGCCGACAGCAGTCAACCCCTTCTCAGTGACC  
GCATCGACGTGGTGGTGGCCACCACCCTTTCCATTACGGTGATCTCTGGGCAGTTCCTGTGAGAACGACGCTGC  
GCACCTATGTAGAAGTGGAGCTGTTTGGCCTTCTGGGGACCCCAAGAGGCGCTATCGAACTAAGCTGTCAACCA  
GTACTAACTCCATCAATCTGTCTGGAAGGAGGAGCCCTTTGTCTTTGAGAAGATCTTGATGCCCTGAGCTGGCCT  
CCCTCAGAGTGGCTGTGATGGAGGAAGGCAACAAGTTTCTTGGACACCGCATCATCCCCATCAATGCCCTAAATT  
CTGGGTACCAACCTGTGCTGACAGTGAGAGCAACATGCCCCCACCATGCCTGCGCTCTTCACTCTTCTGCTG  
AGATGAAGGACTACATACCTGGTGTCTGGGCAGATCTCACTGTGGCCCTCGCCAAACCCCTTCCACTGGCGAGTC  
CCCATGACACGAAGTCTGTGAAGCTCAAGGAGGCCATGGGAGGTCTGCCTGAGAAGCCCTTCCACTGGCGAGTC  
CAGTTGCCAGCCAGGTCAATGGGGCGTTGGCCCCAACGAGCAATGGGTACCAGCAGCCAGGGCCGGGGCCAGGG  
AAGAGGCTATGAAAGAAGCTGCGGAGCCGCGGACCGCCAGCCTGGAGGAGCTCCGGGAGCTAAAGGGCGTGGTGA  
AGCTGCAGCGGCGGCACGAGAAGGAGCTGCGAGAGTTGGAGCGCGGAGCGCGGCTGGGAGGAGCTGCTGC  
AGCGGGGCGCGGCGCAGCTGGCGGAGCTCGGGCCACCGGGCGTGGGGGCGTGGGGCCTGCAAGCTCGGTCCCG  
GCAAGGGCTCTCGCAAGAAGAGGAGCCTGCCCCGCGAGGAGCGCCGAGCGCGCGGGCGAGGGCCCTGAGG  
GCGTGGACGGGCGCGTGGCGGAGCTGAAAGACAGGCTGGAGCTGGAGCTGCTGCGGAGGGCGAGGAGCAGTACG  
AGTGCCTTCTGAAGCGCAAGGAGCAGCACGTGGCCGAGCAATCTCCAAATGATGGAGCTGGCCAGAGAGAAAC  
AGGCGGCAGAGCTGAAGGCCCTGAAGGAGACGTGCGAGAACGACACCAAGAGATGAAGAAAAAGCTGGAGACAA  
AGAGACTGGAGCGGATCCAGGGCATGACCAAAGTCACCACAGACAAGATGGCCAGGAGAGGTTGAAGAGAGAGA  
TTAACAACCTCCACATCCAGGAAGTAGTGCAGGTGATCAAGCAGATGACGGAGAACTTGGAGAGGACACAGAGA  
AGCTGGAGGAGAAGCAGGCGGCTTGCTTGAACAGATACGGGAGATGGAAGAGCAGTTCCAGAAGGAGGCGCTGG  
CAGAGTACGAGGCCAGGATGAAGGGTCTGGAGGCAGAGGTGAAGGAGTGGTGAAGGCCTGCCTCAGGACCTGCT



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**FIGURE 4141B**

TTCCCTCCGAGGCCAAGGACAAGCCTGAGAGGGCCTGCGAGTGCCCCCAGAGCTGTGTGAGCAGGACCCACTCA  
TAGCAAAGGCAGATGCCCAGGAGAGCCGCCTCTGATGCCCCCATCCCCTGGGACATTTAGCAAGGAGGTTGAGC  
CCCTTCTCTGGGATGTGGTTCTATTCCCCCAGGAAAAAGGAGCCCCAGCCTTCTGAGGCTGTGGGAACCTGTGGC  
TGCCTTGGACGCTGCAGCCCCCTCCTCAACGGCCAGGCCAGAGTCTGAGACAGGACCCAGGCACCCTCACGGCAG  
GGCCTCTCTGGGGCCTAGAAGTCTTCTCAAGCTGACTTCCTACCTCCCCCTCCATCTCTAGATAAGTGTATATA  
TTTGTGAGGGCAAAGACTATGGACTGGAAGGCAGAAAGTGGGATCCTGGCCCCACTCTGCCTTTCCTATTGAG  
CAACCAGCTCTGGGCTCAGTTTCCTCACCTGGAGGGTTGGACCCACTCACCTCCACTCTAGCCCCGAACCCCTCCT  
GCCCCAGGCTTCCAGGCCCCATCAGGCCTGCCCTGAGTTGGCCTTGTCCTCCTTGGGCAGATCCTGGCACTA  
CCTCACAGCTCCCTGGGGACGGCCACTCCCTGGCTGAGGGCCCTCCCTCCCCTCTGCCTGTCCGGAACGGGAGG  
CTGAAATGAAAAGCTGCCTTGGCCCTGCTTGGCTGAGTCACAAGGGGCAGTGGGCTCTTGGGTGCTGTTCACC  
CTGACCCTGGCTCACCCCTCTTCTAGGCCTGGGGGCAGGCAGTTCCTACCATGTACCCCTCTCAGGCTGCCTGC  
CTGACAAGGTCAGCATCATTTGCTCTCCTGAATTTATGAGGTTTATTTATTTTCTCTTTCCTACTCCTATTAAA  
GAACCTCGTCCCAGTGAAA

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## FIGURE 4142

MSLLNPVLLPPKVAYLSQGERFIKWDETTVASPVILRVDPKGYLYWYQSKEMEFLDITSIRDTRFGKFAKM  
PKSQKLRDVFNMDFPDNSFLLKTLTVVSGPDMVDLTFHNFVSYKENVGKAWAEDVLALVKHPLTANASRSTFLDK  
ILVKLKMQLNSEGKIPVKNFFQMFPADRKRVEAALSACHLPKGKNDAINPEDFPEPVYKSFILMSLCPRPEIDEIF  
TSYHAKAKPYMTKEHLTKFINQKQRDSRLNSLLFPPARPQVQGLIDKYEPSGINAQRGQLSPEGMVWFLCGPEN  
SVLAQDKLLLHDMTQPLNHYFINSSHNTYLTAGQFSGLSSAEMYRQVLLSGCRCVELDCWKGKPPDEEPIITHG  
FTMTTDIFFKEAIEAIAESAFAKTSPYPIILSFENHVDSPRQQAQMAEYCRTIFGDMLLTEPLEKFPLKPGVPLPS  
PEDLRGKILIKNKNQFSGPTSSSKDTGGEAEGSSPPSAPAVWAGEEGTELEEEVEEEEEESGNLDEEEIKKM  
QSDEGTAGLEVTA YEEMSSLVNYIQPTKFVSFEFSAQKNRSYVISSFTELKAYDLSKASVQFVDYNKRQMSRIY  
PKGTRMDSSNYMPQMFWNAGCQMVALNFQTMDLPMQQNMAVFEFNGQSGYLLKHEFMRRPDKQFNPFVDRIDVV  
VATTLISITVISGQFLSERSVRITYVEVELFGLPGDPKRRYRTKLSPSTNSINPVWKEEPFVFEEKILMPELASLRVA  
VMEEGNKFLGHRIIPINALNSGYHHLCLHSESNMPLTMPALFIFLEMKDYIPGAWADLTVALANPIKFFSAHDTK  
SVKLKEAMGGLPEKPFPLASPVASQVNGALAPTSNGSPAARAGAREEAMKEAAEPRTASLEELRELKGVVKLQRR  
HEKELRELERRGARRWEELLORGAAQLAELGPPGVGGVGACKLGPGKGSRRKRSLPREESAGAAPGEGPEGVDGR  
VRELKDRLELELLRQGEQYECVLKRKEQHVAEQISKMMELAREKQAAELKALKETSENDTKEMKKKLETKRLER  
IQGMTKVTTDKMAQERLKRREINNSHIQEVVQVIKQMTENLERHQEKLEEKQAACLEQIREMEKQFQKEALAEYEA  
RMKGLEAEVKESVRACLRCTCFPSEAKDKPERACECPPELCEQDPLIAKADAQESRL

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**FIGURE 4143**

ATGTTCCCCCGCCCGCTGACCCCGCTGGCGGCCCCAAATGGCGCCGAGCCCTGGGCGGGCGCTGAGGCGGGCC  
CCTCTGGGCAGGGCCCGGGCGGGCTGGGTGGGCCGCCCTGCTGCTGCCGTCCATGCTGATGTTTGCGGTGATC  
GTGGCCTCCAGCGGGCTGCTGCTCATGATCGAGCGGGGCATCCTGGCCGAGATGAAGCCCTGCCCCTGCACCCG  
CCCGGCCGCGAGGACAGCCTGGCGCGGGAAAGCCCCAAGCCTGGGGGCTGTCCCTCAGGGCTGGGGACGCG  
GACTTGCAAGTGCGGCAGGACGTCCGGAACAGGACCTGCGGGCGGTGTGCGGACAGCCAGGCATGCCCCGGGAC  
CCCTGGGACTTGCCGCTGGGGCAGCGGCGCACCCCTGCTGCGCCACATCCTCGTAAGTGACCGTTACCGCTTCCTC  
TACTGCTACGTCCCCAAGGTGGCCTGCTCTAACTGGAAGCGGGTGATGAAGGTGCTGGCAGGCGTCTTGACAGC  
GTGGACGTCCGCCTCAAGATGGACCACCGCAGTGACCTGGTGTTCTTGGCCGACCTGCGGCCTGAGGAGATTGCG  
TACCGCCTGCAGCACTACTTTAAGTTCCTGTTTGTGCGGGAGCCCTTGGAACGCCTCCTCTGCTACCGCAAC  
AAGTTTGGCGAGATCCGAGAGTACCAGCAACGCTATGGGGCTGAGATAGTGAGGCGGTACAGGGCTGGAGCGGG  
CCCAGCCCTGCAGGCGACGATGTACATTCCCCGAGTTCCTGAGATACCTGGTGATGAGGACCTGAGCGCATG  
AATGAGCATTGGATGCCCGTGTACCACCTGTGCCAGCCTTGTGCCGTGCACTATGACTTTGTGGGCTCCTATGAG  
AGGCTGGAGGCTGATGCAAATCAGGTGCTGGAGTGGGTACGGGCACCACTCACGTCCGATTTCAGCTCGCCAG  
GCCTGGTACCGGCCAGCCAGCCCCGAAAGCCTGCATTACCACTTGTGCAGTGCCCCCGGGCCCTGCTGCAGGAT  
GTGCTGCCTAAGTATATCCTGGACTTCTCCCTCTTTGCCTACCACTGCCTAATGTCACCAAGGAGCGGTGTCAG  
CAGTGACCATGGGTGTGGGGCCAGCAGCTGGTGGGGACTGGTTTCAACGCCAGCTTCTGTGCTTCTGCCTGTCA  
TTCGGAGAAACTCTGGCTCTGGGGCTTGGGGCTTCTCAGGATCCTGGATGGCAGAGACTGCCCTCAGAAGTTCCT  
TGTCCAGGGTGGGCACCCACAGTGAAGTCAAGAGGACAGGGCTAGGCAGGAGACCTGCTGCTCCTCATGGGGGGAT  
CTCTTGGGGGGCAGACACCAGTTTGCCAATGAAGCAACACATCTGATCTAAAGACTGGCTCCAGACCCCGGGCTG  
CCAGGATTATGCAGTCCACTTGGTCTACCTTAATTTAACCTGTGGCCAACTCAGAGATGGTACCAGCCAGGGGC  
AAGCATGACCAGAGCCAGGGACCCTGTGGCTCTGATCCCCATTATCCACCCCATGTGCCTCAGGACTAGAGTG  
AGCAATCATACCTTATAAATGACTTTTGTGCCTTCTGCTCCAGTCTCAAAATTCCTACACCTGCCAGTTCTTT  
ACATTTTCCAAGGAAAGGAAAACGGAAGCAGGGTCTTGCCTGGTAGCTCCAGGACCCAGCTCTGCAGGCACCC  
AAAGACCCTCTGTGCCAGCCTCTTCTTGAGTTCTCGGAACCTCCTCCCTAATTCTCCCTTCTTCCCCACAAG  
GCCTTTGAGGTGTGACTGTGGCTGGTATATCTGGCTGCCATTTTCTGATGCATTATTTAAATTTGTACTTT  
TTGATAGAACCCTTGTAAGGGCTTGTTCCTAATAGCTGACTTTTAAATAAGCAGTTTTATATATAAAAAAA  
AAAAA

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**FIGURE 4144**

MFPRPLTPLAAPNGAEPLGRALRRAPLGRARAGLGPPLLLPSMLMFAVIVASSGLLLMIERGILAEMKPLPLHP  
PGREGTAWRGKAPKPGGLSLRAGDADLQVRQDVNRNRTLRAVCGQPGMPRDPWDLFVGQRRTLLRHILVSDRYRFL  
YCYVPKVACSNWKRVMKVLAVLDSVDVRLKMDHRSDLVFLADLRPEEIRYRLQHYFKFLFVREPLERLLSAYRN  
KFGEIREYQORYGAEIVRRYRAGAGPSPAGDDVTFPEFLRYLVDEDPERMNEHWMPVYHLCQPCAVHYDFVGSYE  
RLEADANQVLEWVRAPPVRFPARQAWYRPASPESLHYHLCAPRALLQDVLFPKYILDFSLFAYPLPNVTKEACQ

Q

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**FIGURE 4145**

ATGTGGCTGGACCGCCGCGGATGGCTCAGGGTTCTTGGACATTGGCGCTACGACCTTAGGCGCCCTAGCTTTACC  
AGGACTTGAGTGCGGATAAGGGCCCAATGGCAGAAACAGTGTCTACCCAGGTTGGGACAGAGGGCGGGCTGAGG  
GCTTCGCATCAGCAAAACGGTGACGCTGGTGCGGACGCGAAGGTTGAGCTGTCCCCGGGCCCCCGAAGCCGGCT  
GGCCGGGAAGTGGAGCCGGCCCCAGTAGGCGGGGAGCATCCCTCGGCTGCAGCCCCAGGCCCGGGCAAGCATAAG  
AAGCGGCGGGGCGCAACCAGGGAGCGTGTCTGCCGCCCGGAAGAAGCGGCGGACCGGGGTGAGCTTCGGAGAT  
GAGCACTTTGCAGAAACAGTTATTACTTCGAGGGCGGCCTGCGTAAGGTGCGGCCCTATTACTTTGACTTCGGG  
ACCTACTGCAAAGGTCGCTGGGTGGGCCACAGCTTGCTGCACGTCTTCAGTACCGAGTTCGGAGCTCAGCCCCTG  
GCCTACTATGAGGCCGCGGTCCGGGCGGGCCGCTGCAACTCAACGAGAAGCCGGTGAGGACCTCAACATCGTG  
CTCAAGGACAATGATTTCTTGCGGAACACAGTGACAGGCATGAGCCACAGTCACAGCAGAGCCCATTGCGCTG  
CTAGCTGAGAACGAAGATGTGGTGGTTGTAGACAAGCCTTCCTCCATTCCCGTTCACCCCTGTGGCCGCTTCGA  
CACAACACAGTTATCTTCATCCTAGGCAAGGAGCACCAACTCAAGGAGCTACACCCCTGCATCGGCTTGACCGC  
CTTACCTCAGGGGTGCTTATGTTTGCCAAGACAGCTGCAGTCTCTGAGAGAATTCAGAGCAGGTTTCGGGACCGG  
CAGCTGGAGAAGGAGTACGTGTGCCGGGTGGAAGGGGAGTTCCCCACTGAGGAAGTGACCTGTAAAGAACCCATC  
TTAGTGGTGTCTTACAAAGTAGGGGTGTGCCGTGTAGATCCCCGGGGCAAGCCCTGTGAGACAGTGTTCCAGAGG  
CTAAGCTACAATGCCAGTCCAGTGTGGTACGGTGCCGGCCACTCACAGGCCGCACACACCAGATTCGAGTCCAC  
CTTCAGTTCTTGGGCCATCCCATTCTCAACGACCCCATCTACAACCTCAGTTGCCTGGGGTCCTTCTCGAGGCCGG  
GGCGGCTACATTCCAAGACAAACGAGGAGTTGCTACGGGACCTGGTAGCAGAGCACCAGGCCAAACAGAGCCTG  
GATGTGCTAGATCTCTGTGAGGGTGACCTGTCCCCAGGACTCACAGACTCTACGGCCCCCTCCTCAGAGTTGGGC  
AAGGACGACCTGGAAGAGTTGGCTGCAGCTGCCAGAGATGGAGGAAGTAGCTGAGGCAGCCCCCTCAGGAGTTG  
GACACAATAGCCTTGGCATCAGAGAAGGCAGTTGAAACAGATGTCATGAATCAAGAGACAGACCCACTCTGTGCA  
GAGTGCCGGCTGGTGCACAGGATCCCTTGCCCCAAGACCTTGTGATGTTCTACATGCCCTACGCTATAAAGGG  
CCAGGCTTTGAGTACTTTTCACCAATGCCTGCCTGGGCACAGGATGACTGGCAAAGGACTGA

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**FIGURE 4146**

MWLDRRGWLRVLGHWRYDLRRPSFTRTWSGDKGPMaETVSTQVGTEGGLRASHQQNGDAGGDAKVELSPGPPKPA  
GREVEPAPVGGEHPSAAAPGPGKHKRRGATRERVVPPKKRRTGVSGDEHFAETSYFFEGGLRKVRPYFDFR  
TYCKGRWVGHSLLHVFSTEFRAQPLAYYEAAVRAGRLQLNEKPVQDLNIVLKDNDFLRNTVHRHEPPVTAEPIRL  
LAENEDVVVDKPSSIPVHPCGRFRHNTVIFILGKEHQLKELHPLHRLDRLTSGVLMFAKTA AVSERIHEQVRDR  
QLEKEYVCRVEGEFPTEEVTCKEPILVVS YKVGVC RVDPRGKPCETVFQRLSYNGQSSVVR CRPLTGRTHQIRVH  
LQFLGHPILNDPIYNSVAWGPSRGRGGYIPKTNEELLRDLVAEHQAKQSLDVLDLCEGDLSPGLTDSTAPSSELG  
KDDLEELAAAAQKMEEVAE AAPQELDTIALASEKAVETDVMNQETDPLCAECRLVRQDPLPQDLVMFLHALRYKG  
PGFEYFSPMPAWAQDDWQKD

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**FIGURE 4147**

TAAGGAGAGTGC GGCCTTCCCGAGGCGTG CAGCTGGGAACTGCAACTCATCTGGGTTGTGCGCAGAAGGCTGGG  
GCAAGCGAGTAGAGAAGTGGAGCGTAAGCCAGGGGCGTTGGGGGCCGTGCGGGTCGGGCGCGTGCCACGCCCCGCG  
GGGTGAAGTCGGAGCGCGGGGCTGCTGGAGAGAGGAGCGCTGCGGACCGAGTAATGGCAATGCAGATGCAGCTT  
GAAGCAAATGCAGATACTTCAGTGGAAGAAGAAAGCTTTGGCCACAACCCATTTACGGTTAGAGCAGTGTGGC  
ATAAATGCCAACGATGTGAAGAAATTGGAAGAAGCTGGATTCCATACTGTGGAGGCTGTTGCCTATGCGCCAAAG  
AAGGAGCTAATAAATATTAAGGGAATTAGTGAAGCCAAAGCTGATAAAATTCTGGCTGAGGCAGCTAAATTAGTT  
CCAATGGGTTTCACCACTGCAACTGAATTCCACCAAAGGCGGTCAGAGATCATAACAGATTACTACTGGCTCCAAA  
GAGCTTGACAAACTACTTCAAGGTGGAATTGAGACTGGATCTATCACAGAAATGTTTGGAGAATTCCGAACTGGG  
AAGACCCAGATCTGTCATACGCTAGCTGTACCTGCCAGCTTCCCATTGACCGGGGTGGAGGTGAAGGAAAGGCC  
ATGTACATTGACACTGAGGGTACCTTTAGGCCAGAACGGCTGCTGGCAGTGGCTGAGAGGTATGGTCTCTCTGGC  
AGTGATGTCCTGGATAATGTAGCATATGCTCGAGCGTTCAACACAGACCACCAGACCCAGCTCCTTTATCAAGCA  
TCAGCCATGATGGTAGAATCTAGGTATGCACTGCTTATTGTAGACAGTGCCACCGCCCTTTACAGAACAGACTAC  
TCGGGTCGAGGTGAGCTTTCAGCCAGGCAGATGCACTTGGCCAGGTTTCTGCGGATGCTTCTGCGACTCGCTGAT  
GAGTTTGGTGTAGCAGTGGTAATCACTAATCAGGTGGTAGCTCAAGTGGATGGAGCAGCGATGTTTGCTGCTGAT  
CCCCAAAACCTATTGGAGGAAATATCATCGCCCATGCATCAACAACCAGATTGTATCTGAGGAAAGGAAGAGGG  
GAAACCAGAATCTGCAAAATCTACGACTCTCCCTGTCTTCTGAAGCTGAAGCTATGTTGCCATTAAATGCAGAT  
GGAGTGGGAGATGCCAAAGACTGAATCATTGGGTTTTTCTCTGTGTTAAAAACCTTAAGTGCTGCAGCCTAATGAG  
AGTGCACTGCTCCCTGGGGTTCTCTACAGGCCTCTTCTGTGTGACTGCCAGGATAAAGCTTCCGGGAAAACAG  
CTATTATATCAGCTTTTCTGATGGTATAAACAGGAGACAGGTCAGTAGTCACAACTGATCTAAATGTTTATTC  
CTTCTGTAGTGTATTAATCTCTGTGTGTTTTCTTTGGTTTTGGAGGAGGGGTATGAAGTATCTTTGACATGGTGC  
CTTAGGAATGACTTGGGTTTAAACAAGCTGTCTACTGGACAATCTTATGTTTCCAAGAGAACTAAAGCTGGAGAGA  
CCTGACCCTTCTCTCACTTCTAAATTAATGGTAAAAATAAATGCCTCAGCTATGTAGCAAAGG

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**FIGURE 4148**

GGCACGAGGCAGGCCAGGTGTGTGCGTCCGTCGGTCTTTCCGTGCCCCACGCCGGAGACCAGCCCCGGAGGCCGCC  
TGGGCCTATCCCTGTGCCAGGCACCATGAAGCAGGAGTCTGCAGCCCCGAACACCCCGCCACCTCGCAGTCCCC  
TACGCCGTCGGCTCAGTTCCCCCGAAACGACGGCGACCCCTCAAGCGCTGTGGATTTTCGGGTACGGCTCCCTGGT  
GTGGAGGCCGACTTCGCCTACAGCGACAGCCGTGTGGGCTTCGTGCGCGGTACAGCCGCGTTTCTGGCAGGG  
AGACACCTTCCATCGGGGCAGCGACAAGATGCCTGGCCGTGTGGTGACGCTCCTTGAAGATCATGAGGGCTGCAC  
TTGGGGCGTGGCATAACCAAGTGCAAGGGGAGCAGGTAAGCAAGGCCCTGAAGTACCTGAATGTGCGAGAGGCAGT  
GCTTGGTGGCTACGATAACCAAGGAGGTCACCTTCTATCCCCAAGATGCTCCTGACCAACCACTGAAGGCATTGGC  
CTATGTGGCCACCCACAGAACCCTGGTTACCTGGGCCCTGCGCCTGAAGAGGCCATTGCCACGCAGATCCTGGC  
CTGCCGGGGCTTCTCCGGCCACAACCTTGAATACTTGCTGCGTCTGGCAGACTTCATGCAGCTCTGTGGGCCCTCA  
GGCGCAGGACGAGCACCTGGCAGCCATCGTGGACGCTGTGGGCACCATGTTGCCCTGCTTCTGCCCCACCGAGCA  
GGCTCTGGCGCTGGTGTGAGGGGCTGAGCCCCCTGCGGGGAGTGCTCATGTGGACATCAGGGCCAGACACCCACTC  
CAGTGACACAAGACAGACTTGCGACCGCTTGAGCCCACTGAGCAGATATGGTGGGTGGCTGGAGGCTTCTCTTTCT  
CAGTCCCTGCCTGTCTGCCAGCTGCAGCTCTCCTGCTTGACACTGACTTACTACTTGAACTTTATTTATTGCA  
CCATGTTGGTGTGGTGGGCAGGTGGAGGGCCTGCCCTGGACACAGGGGCCCTGCTGAGCAGTGGCCCCATCCTGG  
AACTTGACCAGATTCCCCCAGTGCTGCTGCTAACCCACACACCCAGGCCTCCACCTCCCCAGGGAGTCTCCA  
AGAGCCTCGATCCTCTGCTCACTCAGCCAGCCATCCATAGCCCTGGGAATTCCACCTGCCAAGGATCCCAGCAG  
GCTGGATGAGGGATAGTAGGGCATGAGGAGAAGGAGCCCTGTAAGGACTGAGGCCCGGCCAGCCCTTCTCCTCC  
ACCA GTTCCCCAGAGCAGAGCTGGAGCTGATGCCTGGACACAGCTGCTGAGCCTGGCCTGGGCCTCTTACCCACT  
TGGTGTGTTTTCTGTCCCTCTGTCTGTCTGTCTATCTACTTGTCTGTCTGGGCCACTCCTGCCTGTGTGTTGGTC  
TATTCCTGGGAAGCTCATCACTACAGGCCCTGGCAACCTTCCAGTCTGTCCCATCTGTTACCCATAAAACTAT  
CTCTTTAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 4149**

MKQESAAPNTPPTSQSPTPSAQFPRNDGDPQALWIFGYGSLVWRPDPFAYSDSRVGFVRGYSRRFWQGDTFHRGSD  
KMPGRVVTLLLEDHEGCTWGVAYQVQGEQVSKALKYLVREAVLGGYDTKEVTFYPQDAPDQPLKALAYVATPQNP  
GYLGPAPEEAIATQILACRGFSGHNLEYLLRLADFMQLCGPQAQDEHLAAIVDAVGTM LFCFCPT EQALALV

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**FIGURE 4150**

AGGCCACAGGGCATGGATCAGCCCCACTGCATCTCAAGTGAAGTGTATAGCCAAGTCTTAAACCTCTCACGGGGC  
AAGCCTGACACAGACCCCCCTTTAGATGCTCAGGCATACTGTTTCCATCCCATTCCACTCTTCGGCTCTGACACG  
TCCCTTGCAAAGTCTCCGCAGGTGCTGTGAAGAGCCTTCCATGGTAGAGATTTCTCTTAAGAGTGTGATTTCTCA  
TAGGGCTAGTAAGGGAGATTGTATACCTGTTGTCCACAGTCTTCAGGCAGCTCCCCAGGTCTCTGAACCCAGAG  
TGTCGTCATTGGAGAGAGCAGTGACTGCGAGAGATGGTGGAGGCCGCTAAGCATGGTAGAGGCTAGAGGAAGTCT  
ATCCACAGGCAGTTGTGTTCCAGCAATTCCCTCCCATCTGCATGGTTCACACCAAGAGAACCTTCAGATCCTAC  
CAGCAACCGTAGCACCTTCCACCCAGGGGACTCCAGAAAGCCAGTAAAGAGACCAGGAGCCACCTCAATCAGCAG  
GACAGCCTCACTGCCCCCTCTTGACAGAGTCCCCCTTGCCCCATCCTGAATGCACAGTCTCCCTGCTCATGCCCTTCA  
GTCCCCTGCTTGGCTGTATGCACTGTCTATATTGCACTGAGAGAGGAAGGGACAGCAGGAGTGAGGTGAAGAGGG  
CGGAGAGAGGGGGCAGGCTCGGCACCGGCCCTCCAGCCCGGCCAGCCTGAGCTTGCTGCCCTCCAGTAGAGACA  
GAGGGGCAGTGTGTTGCAAGGGAGGTGTTTCTGCCTGTCCCTGCCTGATGTCCCTGGTGGAGCAGGTACCTCCGGG  
CGGGCAAGCCTCTGATTGACACCTGAAAATCGCGGAATTGAGTTTCGATAGATTGATTTTTAAACTTTTTTG  
GAGTAGGGGTATAGGGGAATCATTTAATTTAAATCATTAAAGATTCCCCTGCTCAAACCCAGATTCTGTGTACA  
GATGCTATTTAGAGGGAATCAGAAAAATGCCAAGCCTTTTCTCTTTGAATGTGCTATTTTATAACTGAACCTGT  
ACATATGTATAAAGAGAGACACATCTTCCTTTTACTAACTGGATAAAAAAATCTTAAATAAAATGGAGTGAGATA  
ATTTTAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4151**

MVEISLKSVISHRASKGDCIPVVHSLQAAPQVSEPQSVVIGESSDCERWWRPLSMVEARGSLSTGSCVPSNSSHP  
AWETPREPSDPTSNRSTFHPGDSQKPVKRPGATSI SRTASLPLLQSPLCPS

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**FIGURE 4152**

GGGATTGTAACXCGCTGACGAAGTTTGGTGATCCATCTTCCGAGTATCGCCGGGATTTGGAATCGCGATGATCA  
TCCCCTCTCTAGAGGAGCTGGACTCCCTCAAGTACAGTGACCTGCAGAACTTAGCCAAGAGTCTGGGTCTCCGGG  
CCAACCTGAGGGCAACCAAGTTGTTAAAAGCCTTGAAAGGCTACATTAAACATGAGGCAAGAAAAGGAAATGAGA  
ATCAGGATGAAAGTCAAACCTTCTGCATCCTCTTGTGATGAGACTGAGATACAGATCAGCAACCAGGAAGAAGCTG  
AGAGACAGCCACTTGGCCATGTCACCAAAACAAGGAGAAGGTGCAAGACTGTCCGTGTGGACCCTGACTCACAGC  
AGAATCATTAGAGATAAAAATAAGTAATCCCCTGAATTCCAGAATCATGAAAAGCAGGAAAGCCAGGATCTCA  
GAGTACTGCAAAAGTTCTTCTCCACCAGACGAGCACCAGAAGCTGAGAATGCTGTTTCTCAGGTAACAGAG  
ATTCAAAGGTACCTTCAGAAGGAAAGAAATCTCTCTACACAGATGAGTCATCCAAACCTGGAAAAATAAAAGAA  
CTGCAATCACTACTCCAAACTTTAAGAAGCTTCATGAAGCTCATTTTAAGGAAATGGAGTCCATTGATCAATATA  
TTGAGAGAAAAAGAAACATTTTGAAGAACACAATTCCATGAATGAAGTGAAGCAGCAGCCCATCAATAAGGGAGG  
GGTCAGGACTCCAGTACCTCCAAGAGGAAGACTCTCTGTGGCTTCTACTCCCATCAGCCAACGACGCTCGCAAGG  
CCGGTCTTGTGGCCCTGCAAGTCAGAGTACCTTGGGTCTGAAGGGTCACTCAAGCGCTCTGCTATCTCTGCAGC  
TAAAACGGGTGTCAGGTTTTAGCTGCTACTAAAGATAATGAGCATAAGCGTTCCTGACCAAGACTCCAGCCAG  
AAAGTCTGCACATGTGACCGTGTCTGGGGGCACCCAAAAGGCGAGGCTGTGCTTGGGACACACAAATTAAGAC  
CATCAGGGGAATTTGCTGCTGTTATTACCCATTCAAGTTGACAACAGTGAAGCAACGCAGACTCCAGTCTCCAA  
TAAGAAACCAAGTGTGATCTTAAAGCAAGTTTGTCTCGTCCCCTCAACTATGAACCACACAAAGGAAAGCTAAA  
ACCATGGGGGCAATCTAAAGAAAATAATTATCTAAATCAACATGTCAACAGAATTAACCTTCTACAAGAAACTTA  
CAACAACCCCATCTCCAGACAAAGGAAGAGCAACGGAAGAAACGCGAGCAAGAACGAAAGGAGAAGAAAGCAAA  
GGTTTTGGGAATGCGAAGGGGCCCTCATTTTGGCTGAAGATTAATAATTTTTTAATATCTTGTAATATTCTGTGTA  
TTCTCAACTTTTTTCTTTTGTAAATTTTTTTTTTTTGTGCTGTCATCCCACTTTAGTCACGAGATCTTTTTCTG  
CTAACTGTTTATAGTCTGTGTAGTGTCCATGGGTTCTTCATGTGCTATGATCTCTGAAAAGACGTTATCACCTTA  
AAGCTCAAATTTCTTGGGATGGTTTTTACTTAAGTCCATTAACAATTCAGGTTTCTAACGAGACCCATCCTAAAA  
TTCTGTTTCTAGATTTTTAATGTCAAGTTCCCAAGTTCCCCTGCTGGTTCTAATATTAACAGAACTGCAGTCTT  
CTGCTAGCCAATAGCATTTACCTGATGGCAGCTAGTTATGCAAGCTTCAGGAGAATTTGAACAATAACAAGAATA  
GGGTAAGCTGGGATAGAAAGGCCACCTCTTCACTCTCTATAGAATATAGTAACCTTTATGAAACGGGGCCATATA  
GTTTGGTTATGACATCAATATTTTACCTAGGTGAAATTTAGGCTTATGTACCTTCGTTCAAATATCCTCATG  
TAATTGCCATCTGTCACTCACTATATTACAAAAATAAACTCTACAACCTATTCTAACATTGCTTACTTAAAAG  
CTACATAGCCCTATCGAAATGCGAGGATTAATGCTTTAATGCTTTTAGAGACAGGGTCTCACTGTGTTGCCAGG  
CTGGTCTCAAACCTCCACCAATGTACTTCTTATTCATTTTATGAAAAGACTAGGCTTTGCTTAGTATCATGTCC  
ATGTTTCTTACCTCAGTGGAGCTTCTGAGTTTTTACTGCTCAAGATCGTCATAAATAAAATTTTTTCTCATT  
GTCAAAAA

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**FIGURE 4153**

MNELKQQPINKGGVRTPVPPRGRLSVASTPISQRRSQGRSCGPASQSTLGLKGSLKRS AISAAKTGVRFSAATKD  
NEHKRSLTKTPARKSAHVTVSGGTPKGEAVLGTHLKTITGNSAAVITPFKLITTEATQTPVSNKKPVFDLKASLS  
RPLNYEPHKGKLPWQSKENNYLNQHVNRINFYKKTYKQPHLQTKEEQRKKREQERKEKKAKVLGMRRGLILAE  
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**FIGURE 4154**

ATGATCATCCCCTCTCTAGAGGAGCTGGACTCCCTCAAGTACAGTGACCTGCAGAACTTAGCCAAGAGTCTGGGT  
CTCCGGGCCAACCTGAGGGCAACCAAGTTGTTAAAAGCCTTGAAAGGCTACATTAAACATGAGGCAAGAAAAGGA  
AATGAGAATCAGGATGAAAGTCAAACCTTCTGCATCCTCTTGTGATGAGACTGAGATACAGATCAGCAACCAGGAA  
GAAGCTGAGAGACAGCCACTTGGCCATGTCACCAAAACAAGGAGAAGGTGCAAGACTGTCCGTGTGGACCCTGAC  
TCACAGCAGAATCATTTCAGAGATAAAAATAAGTAATCCCACTGAATTCCAGAATCATGAAAAGCAGGAAAGCCAG  
GATCTCAGAGCTACTGCAAAAGTTCTTCTCCACCAGACGAGCACCAAGAAGCTGAGAATGCTGTTTCCTCAGGT  
AACAGAGATTCAAAGGTACCTTCAGAAGGAAAGAAATCTCTCTACACAGATGAGTCATCCAAACCTGGAAAAAT  
AAAAGAAGTGAATCACTACTCCAAACTTTAAGAAGCTTCATGAAGCTCATTTTAAGGAAATGGAGTCCATTGAT  
CAATATATTGAGAGAAAAAGAAACATTTTGAAGAACAATTCATGAATGAACTGAAGCAGCCCATCAATAAG  
GGAGGGGTCAGGACTCCAGTACCTCCAAGAGGAAGACTCTCTGTGGCTTCTACTCCCATCAGCCAACGACGCTCG  
CAAGGCCGGTCTTGTGGCCCTGCAAGTCAGAGTACCTTGGGTCTGAAGGGGTCCTCAAGCGCTCTGCTATCTCT  
GCAGCTAAAACGGGTGTCTAGGTTTTAGCTGTCTACTAAAGATAATGAGCATAAGCGTTCCTGACCAAGACTCCA  
GCCAGAAAGTCTGCACATGTGACCGTGTCTGGGGGCACCCAAAAGGCGAGGCTGTGCTTGGGACACACAAATTA  
AAGACCATCACGGGAATTCTGCTGCTGTTATTACCCCATTCAGTTGACAACCTGAGGCAACGCAGACTCCAGTC  
TCCAATAAGAAACCAAGTGTTTGATCTTAAAGCAAGTTGTCTCGTCCCCTCAACTATGAACCACACAAAGGAAAG  
CTAAACCATGGGGGCAATCTAAAGAAAATAATTATCTAAATCAACATGTCAACAGAATTAAGTTCTACAAGAAA  
ACTTACAAACAACCCCATCTCCAGACAAAGGAAGAGCAACGGAAGAAACGCGAGCAAGAACGAAAGGAGAAGAAA  
GCAAAGGTTTTGGGAATGCGAAGGGGCCTCATTTTGGCTGAAGATTAA

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**FIGURE 4155**

MIIPSLEELDSLKYSDLQNLAKSLGLRANLRATKLLKALKGYIKHEARKGNENQDESQTSASSCDETEIQISNQE  
EAERQPLGHVTKTRRRCKTVRVPDPSQQNHSEIKISNPTEFQNHEKQESQDLRATAKVPSPPEHQAENAVSSG  
NRDSKVPSEGKKSlytDESSKPGKNKRTAITTPNFKKLHEAHFKEMESIDQYIERKKKHFEHNSMNELKQPINK  
GGVRTPVPPRGRLSVASTPISQRRSQGRSCGPASQSTLGLKGS�KRSASAAKTGVRFSAATKDNEHKRSLTKTP  
ARKSAHVTVSGGTPKGEAVLGTHKLTITGNSAAVITPFKLTTTEATQTPVSNKKPVFDLKASLSRPLNYEPHKGK  
LKPWGQSKENNYLNQHVNRINFYKKTYPHLQTKEEQRKKREQERKEKKAKVLGMRRGLILAED

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**FIGURE 4156A**

CCCCGCCCTCCTCCCTCCTCGCTCGCGGGCCGGGCCCCGGCATGGTGCGGCGTCGCCGCCGATGGCGCTGAGGCGG  
AGCATGGGGCGGCGGGGGCTCCCGCCGCTGCCGCTGCCGCCGCCACCGCGGCTCGGGCTGCTGCTGGCGGCTCTG  
GCTTCTCTGCTGCTCCCGGAGTCCGCCGCCGCGAGGCTGAAGCTCATGGGAGCCCCGGTGAAGCTGACAGTGCT  
CAGGGGCAGCCGGTGAAGCTCAACTGCAGTGTGGAGGGGATGGAGGAGCCTGACATCCAGTGGGTGAAGGATGGG  
GCTGTGGTCCAGAACTTGGACCAGTTGTACATCCAGTCAGCGAGCAGCACTGGATCGGCTTCCTCAGCCTGAAG  
TCAGTGGAGCGCTCTGACGCCGGCCGGTACTGGTGCCAGGTGGAGGATGGGGGTGAAACCGAGATCTCCAGCCA  
GTGTGGCTCACGGTAGAAGGTGTGCCATTTTTCACAGTGGAGCCAAAAGATCTGGCAGTGCCACCCAATGCCCT  
TTCCAATGTCTTGTGAGGCTGTGGGTCCCCCTGAACCTGTTACCATTGTCTGGTGGAGAGGAACCTACGAAGATC  
GGGGGACCCGCTCCCTCTCCATCTGTTTAAATGTAACAGGGGTGACCAGAGCACCATGTTTTCCTGTGAAGCT  
CACAACCTAAAAGGCCCTGGCCTCTTCTCGCACAGCCACTGTTACCTTCAAGCACTGCCTGCAGCCCCCTTCAAC  
ATCACCGTGACAAAGCTTTCAGCAGCAACGCTAGTGTGGCCTGGATGCCAGGTGCTGATGGCCGAGCTCTGCTA  
CAGTCTGTACAGTTAGGTGACACAGGCCCCAGGAGGCTGGGAAGTCTGGCTGTTGTGGTCCCTGTGCCCCC  
TTTACCTGCCTGCTCCGGGACCTGGTGCTGCCACCAACTACAGCCTCAGGGTGCGCTGTGCCAATGCCTTGGGG  
CCCTCTCCCTATGCTGACTGGGTGCCCTTTAGACCAAGGGTCTAGCCCCAGCCAGCGCTCCCCAAAACCTCCAT  
GCCATCCGCACAGATTAGGCCTCATCTGGAGTGGGAAGAAGTGATCCCCGAGGCCCCCTTGGAAAGGCCCTTG  
GGACCTACAACTGTCTGGGTTCAGACAATGGAACCCAGGATGAGCTGACAGTGGAGGGGACCAGGGCCAA  
TTGACAGGCTGGGATCCCCAAAAGGACCTGATCGTACGTGTGTGCGTCTCCAATGCAGTTGGCTGTGGACCTGG  
AGTCAGCCACTGGTGGTCTCTTCTCATGACCGTGCAGGCCAGCAGGGCCCTCCTCACAGCCGCACATCCTGGGTA  
CCTGTGGTCCCTTGGTGTGCTAACGGCCCTGGTGACGGCTGCTGCCCTGGCCCTCATCTGCTTCGAAAGAGACGG  
AAAGAGACGCGGTTTGGGCAAGCCTTTGACAGTGTATGGCCCCGGGAGAGCCAGCCGTTCACTTCCGGGCAGCC  
CGGTCTTCAATCGAGAAAGGCCCGAGCGCATCGAGGCCACATTGGACAGCTTGGGCATCAGCGATGAACATAAG  
GAAAACTGGAGGATGTGCTCATCCAGAGCAGCAGTTACCCCTGGGCCGATGTTGGGCAAGGAGAGTTTGGT  
TCAGTGGGGAGGCCAGCTGAAGCAAGAGGATGGCTCCTTGTGAAAGTGGCTGTGAAGATGCTGAAAGCTGAC  
ATCATTGCCTCAAGCGACATTGAAGAGTTCCCTCAGGGAAGCAGCTTGCATGAAGGAGTTTGACCATCCACAGTG  
GCCAACTTGTGGGGTAAGCCTCCGGAGCAGGGCTAAAGGCCGTCTCCCATCCCCATGGTCACTTGGCCCTTC  
ATGAAGCATGGGGACCTGCATGCCTTCTGCTCGCCTCCCGATTGGGGAGAACCCCTTTAACCTACCCCTCCAG  
ACCCTGATCCGGTTCAATGGTGGACATTGCCTGCGGCATGGAGTACCTGAGCTCTCGGAACCTTACATCCACCGAGAC  
CTGGCTGCTCGGAATTGCATGCTGGCAGAGGACATGACAGTGTGTGGTGACTTCGGACTCTCCCGAAGATC  
TACAGTGGGGACTACTATCGTCAAGGCTGTGCCTCCAACTGCCTGTCAAGTGGCTGGCCCTGGAGAGCCTGGCC  
GACAACCTGTATACTGTGCAGAGTGACGTGTGGGCGTTTCGGGTGACCATGTGGGAGATCATGACACGTGGGCAG  
ACGCCATATGCTGGCATCGAAAACGCTGAGATTTACAACCTACCTCATTGGCGGGAACCGCCTGAAACAGCCTCCG  
GAGTGTATGGAGGACGTGTATGATCTCATGTACCAGTCTGGAGTGTGACCCCAAGCAGCGCCCGAGCTTTACT  
TGTCTGCGAATGGAAGTGGAGAACATCTTGGGCCAGCTGTCTGTGCTATCTGCCAGCCAGGACCCCTTATACATC  
AACATCGAGAGAGCTGAGGAGCCACTGCGGGAGGCAGCCTGGAGCTACCTGGCAGGGATCAGCCCTACAGTGGG  
GCTGGGGATGGCAGTGGCATGGGGCAGTGGGTGGCACTCCAGTGACTGTCCGTACATACTACCCCCGGAGGG  
CTGGCTGAGCAGCCAGGCAGGCAGAGCACCAGCCAGAGAGTCCCCTCAATGAGACACAGAGGCTTTTGTGCTG  
CAGCAAGGGCTACTGCCACACAGTAGCTGTTAGCCACAGGCAGAGGGCATCGGGGCCATTTGGCCGGCTCTGGT  
GGCACTGAGCTGGCTGACTAAGCCCCGTCTGACCCAGCCAGACAGCAAGGTGTGGAGGCTCCTGTGGTAGTC  
CTCCAAAGCTGTGCTGGGAAGCCCGACTGACCAATACCCAAATCCAGTTCTTCTGCAACCACTCTGTGGCC  
AGCTGGCATCAGTTTAGCCCTTGGCTTGTGGAAGTGGGCCAGTCTGGTTGTCTGAACCCAGGCAGCTGGCAG  
GAGTGGGGTGGTTATGTTTCCATGGTTACCATGGGTGTGGATGGCAGTGTGGGGAGGGCAGGTCCAGCTCTGTGG  
GCCCCACCTCCTGCTGAGCTGCCCCCTGCTGCTTAAGTGATGCATTGAGCTGCCTCCAGCCTGGTGGCCAGCT  
ATTACCACACTTGGGGTTTAAATATCCAGGTGTGCCCTCCAAAGTCAAAAGAGATGTCCTTGTAAATATTCCCTT  
TTAGGTGAGGGTTGGTAAGGGGTTGGTATCTCAGGTCTGAATCTTACCATCTTCTGATTCCGCACCCTGCCTA  
CGCCAGGAGAAGTTAGGGGAGCATGCTTCCCTGCAGCTGACCGGGTACACAAAAGGCATGCTGGAGTACCCAGC  
CTATCAGGTGCCCCCTTCCAAAGGCAGCGTGCCGAGCCAGCAAGAGGAAGGGGTGCTGTGAGGCTTGGCCAGGA  
GCAAGTGAAGCCGGAGAGGAGTTAGGAACCCCTTCTCCATACCCACAATCTGAGCACGCTACCAATCTCAAAAT  
ATCTAAGACTAACAAAGGCAGCTGTGTCTGAGCCCAACCCCTCTAAACGGTGACCTTTAGTGCCAACCTTCCCCCT



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**FIGURE 4156B**

CTAACTGGACAGCCTCTTCTGTCCCAAGTCTCCAGAGAGAAATCAGGCCTGATGAGGGGGAATTCCTGGAACCTG  
GACCCCAGCCTTGGTGGGGGAGCCTCTGGAATGCATGGGGCGGGTCCTAGCTGTTAGGGACATTCCAAGCTGTT  
AGTTGCTGTTTAAATAGAAATAAAATTGAAGACTAAAGACCTA

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**FIGURE 4157**

ATGAATAAAACTGACAAAAATCCTTGCTTTCAGAAATTTGTCATTGCCATCTCAACCAAACTGGCATTAGCAAT  
GTAAAAATCCCAAAACATCTTATTGATGCTCACTTCGAGAAGCAGTTGCAGAAGCCCAGACACCAGGAAGGTGAG  
ATCTCTGACACAGAAAAAGAGAACTACAAGACTACAGAGCAGTGCAAGATTGATCAGAAAGCTGTGGACTCACAA  
ATTGTACGAAAAATCAAAGCTATTCCTCAGCTCCAGGGCTACCTGCGATCTGTGTTTGGCCCTGACGAATGGAATT  
TATCCTCACAAATTGGTGTTTTAA

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**FIGURE 4158**

MNKTDKNPCFQKFVIAISTKTGISNVKIPKHLIDAHFEKQLQKPRHQEGEISDTEKENYKTTEQCKIDQKAVDSQ  
IVRKIKAIPQLQGYLRSVFALTNGIYPHKLVF

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**FIGURE 4159**

GGGAGAGTCGAACCCGGAGCAGGGTCCCATCCGAGCGTGGACTGGCGGCAGGATGTTTCAGCTGGATGGGGCGGCA  
GGCGGGCGGGCGGAACGCGCTGGCGGCGCGGACGCGGTGCAGACGGTGACGGGCGGGCTGCGCTCGCTCTACCT  
GCGCAAGGTGCTGCCGCTGGAGGAGGCGTACCGCTTCCACGAGTTCCTACTGCGCTGCGCTGGAGGACGCCGACTT  
CGAGAACAAGCCCATGATCCTGCTGGTGGGCCAGTACAGCACCGGCAAGACCACCTTCATCAGATACCTACTGGA  
GCAGGATTTCCCAGGCATGAGGATTGGTCCGGAGCCACACAGACTCCTTCATCGCCGTGATGTATGGAGAGAC  
TGAGGGCAGCACCCAGGGAATGCTTTAGTCGTGGACCCCAAAAGCCGTTTAGAAAGCTCAGTCGCTTTGGAAA  
CGCTTTCCTGAATCGATTATGTGCTCAGACTCCCCAATCAGGTCTGAAAGAGCATCAGCGTCATCGACAGCCC  
CGGCATCCTTTCTGGGGAGAAGCAGCGCATCAGCCGAGGCTATGACTTCTGCCAGGTCTGCAGTGGTTTGGCGA  
GAGGGTGGACAGGATCATCCTGCTCTTTGACGCTCACAAGCTGGACATCTCAGATGAATTCAGAGGCCATCAA  
GGCCTTCCGGGGCCAGGACGACAAGATCCGTGTGCTGTAACAAGGCCGACCAAGTGGACACGACGAGCTGAT  
GCGGGTCTACGGGGCCCTCATGTGCTCCCTAGGCAAGGTATCAACACGCCCGAGGTACTGCGCGTCTACATTGG  
CTCCTTCTGGGCGCAGCCCTGCAGAACCGGACAACCGCCGGCTCTTCGAGGCTGAGGCCAGGACCTCTTTAG  
AGACATCCAGAGCCTCCCCAGAAGGCAGCGGTGCGCAAGCTCAACGACCTCATCAAGCAGCGAGGCTGGCCAA  
GGTGATGCCTACATCATCAGCTACCTGAAGAAGGAGATGCCAAGTGTATTGGAAAGGAAAACAAGAAGAGAGA  
GCTTATCAGCAGGCTACCGGAAATCTACATTAGCTACAGCGAGAATACCAGATTCTGCAGGGACTTCCCTGA  
GGTCAAGGCTATGCAGGAACAGCTTGAGAACTATGACTTCACCAAATTCCTACTGCTGAAGCCCAAGCTGATCGA  
GGCAGTGGACAACATGCTGAGCAACAAGATCTCGCCCTCATGAACCTCATCAGCCAGGAGGACGAGCACGCC  
CACGCAGCTGGTGCAGGGCGGCGCCTTCGATGGCACCACCGAGGGCCCTTCAACCAGGGCTACGGGGAGGGTGC  
CAAGGAGGGCGCCGACGAGGAGGAGTGGGTCTGGCCAAAGACAAGCCCGTCTACGACGAGCTCTTCTACACTCT  
GTCGCCCATCAATGGCAAGATATCAGGTGTCAACGCCAAGAAGGAGATGGTGACCTCCAAGCTGCCCAACAGCGT  
CCTGGGCAAGATCTGGAAGCTGGCCGACTGCGACTGCGACGGCATGCTTGATGAGGAGGAGTTCGCGCTGGCCAA  
GCACCTCATCAAGATCAAGCTCGACGGCTACGAGCTGCCAGCAGCCTGCCCCCACCCTCGTGCCTCCCTCGCA  
CAGGAAGTCCCTGCCAAGGCCGACTGAGGGGTGGGCTGCAGAACGGGTGGGAAGTGGGGGACCTGGGCCTCAG  
GCCTGCTCCACCACTGACTCACCGAATGACCTTGGGCAAGGCACTGCCCTCTCTGTGCCTTGGTTTCCCCATCTG  
TAGAATGGGGAGGGTGGACACTGGAACTAGATGACTTCTTACCTCCAAAATTCCCTTAGTTTCTATGAAAAT  
ATTGGGGGTAGGGGGGTGGATTAGGAGATTGAAGGGTTGAGAAGAAAGAGAAATTGTCCAAGAGTCTCAGAAC  
CTGCCTGGAGAAATGCGCATGGGGGTGGGCTGGTAAGTCCCAGGAACCACAGGAAGTGAAGTCAAGGCTCACCCA  
GAGCAGCTGGGTCTCCAGGCTGCCTGGGCTTTTGTCTCATGAACAACCTCTGGAGCAGCTGTCTGTCCCTCAGA  
GGGCACCTGGAGGCAGCAAAGATTATCTTATTTATTTTGTCTTCTGCTATATTTAGAGTGGCAAAAAAAT  
AGAGCAGAGGGTTTCTGCTGTCTCCAGACTGTCTACCAAGAGAAGGCGACAGATGCCTCCTGGGTTTGGGAAGGG  
GGATGCACTGTGGATCTGCCATCCATTCTGCAGTCTCCAGCAGAGCAGGCAGTCAGGCCCCAGCGTGCCTCCATC  
CCAGTGCCCCGATGACCATCTGGTCAGCCCTCCCAACCTCCCTTCCAGGGGGCTTACCAGCAAAGCCATATTGCG  
CTAGGAATTTGGAATTCACAACCTTTATTAACCCCTGGCAAACTTCCCCTTGCATGTCAAATCACATTGAAGC  
CTGAAAATTAGCTTTTCTTACTGGTTTTTCCAATAAGTAATAGCAAAGCCACTTATCATACTTAACTACAGTA  
AAGAAAAGAGGTGGTTCTCTGCAGTGATCGTTTAGTGTGGCCCTCAAACATTAAATATCCCGAGGTCTCCTGGT  
GGGTGGCAGGATTTAAATCAATCAAATCCTGTCTAGTGTGTGCAGTGTCTTCGGCCCTGTGGACACAGGTGAA  
TGAGGGACCAGCCCTGCCCTGGGCTGTTGAGAAGAGATCAGTCCACCCAGAGTTAGACATTGTTTTTGTAGAAAA  
CAGGCATTTATATGTCTAGGTTTTTGTGTTTTTTTTTTCCTTACAGGATAAAAGCCTTTATACAGAAACAAA  
ATGGAACCTTTCATATAAAACCTTTTCTTT

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**FIGURE 4160**

CGAACCCGGAGCAGGGTCCCATCCGAGCGTGGACTGGCGGCAGGATGTTTCAGCTGGATGGGGCGGCAGGCGGGCG  
GGCGCGAACGCGCTGGCGGCGCGGACGCGGTGCAGACGGTGACGGGCGGGCTGCGCTCGCTCTACCTGCGCAAGG  
TGCTGCCGCTGGAGGAGGCGTACCGCTTCCACGAGTTCCTACTCGCTGCGCTGGAGGACGCCGACTTCGAGAACA  
AGCCCTTCTACACTCTGTCGCCCATCAATGGCAAGATATCAGGTGTCAACGCCAAGAAGGAGATGGTGACCTCCA  
AGCTGCCAACAGCGTCCTGGGCAAGATCTGGAAGCTGGCCGACTGCGACTGCGACGGCATGCTTGATGAGGAGG  
AGTTCGCGCTGGCCAAGCACCTCATCAAGATCAAGCTCGACGGCTACGAGCTGCCAGCAGCCTGCCCCCACC  
TCGTGCCCCCTCGCACAGGAAGTCCCTGCCCAAGGCCGACTGAGGGGTGGGCTGCAGAACGGGGTGGGAAGTGG  
GGGACCTGGGCCTCAGGCCTGCTCCACCACTGACTCACCGAATGACCTTGGGCAAGGCACTGCCCTCTCTGTGCC  
TTGGTTTCCCCATCTGTAGAATGGGGAGGGTGGACACTGGAACTAGATGACTTCTTTCACCTCCAAAATTCCCT  
TAGTTTCTATGAAAATATTGGGGGTAGGGGGGTGGATTAGGAGATTGAAGGGT

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**FIGURE 4161**

ATGCCGACCGTCATTAGCGCATCTGTGGCTCCAAGGACAGCGGCTGAGCCCCGGTCCCCAGGGCCAGTTCTCTCAC  
CCGGCCCAGAGCAAGGCCACTGAGGCTGGGGGTGGAAACCAAGTGGCATCTATTAGCCATCATCAGCCGCAAT  
TTTCTATTATCGGAGTGAAAGAGAAGACATTTCGAGCAACTTCACAAGAAATGTCTAGAAAAGAAAGTTCTTTAT  
GTGGACCGTGAAGTTCCACCGGATGAGACCTCTCTCTTTATAGCCAGAAGTTCCCCATCCAGTTCTGTTGGAAG  
AGACCTCCGGAAATTTGCGAGAATCCCCGATTTATCATTGATGGAGCCAACAGAACTGACATCTGTCAAGGAGAG  
CTAGGGGACTGCTGGTTTTCTCGCAGCCATTGCCTGCCTGACCCTGAACCAGCACCTTCTTTCCGAGTCATACCC  
CATGATCAAAGTTTCATCGAAACTACGCAGGGATCTTCCACTTCCAGTTCTGGCGCTATGGAGAGTGGGTGGAC  
GTGGTTATAGATGACTGCCTGCCAACGTACAACAATCAACTGGTTTTACCAAGTCCAACCACCGCAATGAGTTC  
TGGAGTGCTCTGCTGGAGAAGGCTTATGCTAAGCTCCATGGTTCCTACGAAGCTCTGAAAGGTGGGAACACCACA  
GAGGCCATGGAGGACTTCACAGGAGGGGTGGCAGAGTTTTTTGAGATCAGGGATGCTCCTAGTGACATGTACAAG  
ATCATGAAGAAAGCCATCGAGAGAGGCTCCCTCATGGGCTGCTCCATTGATGATGGCAGCAACATGACCTATGGA  
ACCTCTCCTTCTGGTCTGAACATGGGGGAGTTGATTGCACGGATGGTAAGGAATATGGATAACTCACTGCTCCAG  
GACTCAGACCTCGACCCAGAGGCTCAGATGAAAGACCGACCCGGACAATCATTCCGGTTCAGTATGAGACAAGA  
ATGGCCTGCGGGCTGGTCAGAGGTCACGCCTACTCTGTACGGGGCTGGATGAGGTCCCGTTCAAAGGTGAGAAA  
GTGAAGCTGGTGCGGCTGCGGAATCCGTGGGGCCAGGTGGAGTGGAAACGGTCTTGGAGTGATAGATGGAAGGAC  
TGGAGCTTTGTGGACAAAGATGAGAAGGCCCGTCTGCAGCACCAGGTCACTGAGGATGGAGAGTTCTGGATGTCC  
TATGAGGATTTTATCTACCATTTTCAAAAGTTGGAGATCTGCAACCTCACGGCCGATGCTCTGCAGTCTGACAA  
CTTCAGACCTGGACAGTGTCTGTGAACGAGGGCCGCTGGGTACGGGGTTGCTCTGCCGGAGGCTGCCGCAACTTC  
CCAGATACTTTCTGGACCAACCCTCAGTACCGTCTGAAGCTCCTGGAGGAGGACGATGACCTGATGACTCGGAG  
GTGATTTGCAGCTTCCTGGTGGCCCTGATGCAGAAGAACCGGCGGAAGGACCGGAAGCTAGGGGCCAGTCTCTTC  
ACCATTTGGCTTCGCCATCTACGAGGTTCCTCAAAGAGATGCACGGGAACAAGCAGCACCTGCAGAAGGACTTCTTC  
CTGTACAACGCCTCCAAGGCCAGGAGCAAAACCTACATCAACATGCGGGAGGTGTCCAGCGCTTCCGCCTGCCT  
CCCAGCGAGTACGTTCATCGTGCCCTCCACCTACGAGCCCCACGAGGGGGGAATTCATCCTCCGGGTCTTCTCT  
GAAAAGAGGAACCTCTCTGAGGAAGTTGAAAATACCATCTCCGTGGATCGGCCAGTGAAAAAGAAAAAACCAG  
CCCATCATCTTCGTTTCGGACAGAGCAACAGCAACAAGGAGCTGGGTGTGGACCAGGAGTCAGAGGAGGGCAAA  
GGCAAAACAAGCCCTGATAAGCAAAAGCAGTCCCCACAGCCACAGCCTGGCAGCTCTGATCAGGAAAGTGAGGAA  
CAGCAACAATTCCGGAACATTTTCAAGCAGATAGCAGGAGATGACATGGAGATCTGTGCAGATGAGCTCAAGAAG  
GTCCTTAACACAGTCGTGAACAAACACAAGGACCTGAAGACACACGGGTTTCACTGGAGTCTTCCGCTAGCATG  
ATTGCGCTCATGGATACAGATGGCTCTGGAAAGCTCAACCTGCAGGAGTTCCACCACCTCTGGAACAAGATTAAG  
GCCTGGCAGAAAATTTTCAAACACTATGACACAGACCAGTCCGGCACCATCAACAGCTACGAGATGCGAAATGCA  
GTCAACGACGCAGGATTCCACCTCAACAACCAGCTCTATGACATCATTACCATGCGGTACGCAGACAAACACATG  
AACATCGACTTTGACAGTTTCATCTGCTGCTTCGTTAGGCTGGAGGGCATGTTTCAGAGCTTTTTCATGCATTTGAC  
AAGGATGGAGATGGTATCATCAAGCTCAACGTTCTGGAGTGGCTGCAGCTCACCATGTATGCCTGA

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**FIGURE 4162**

MPTVISASVAPRTAAEPRSPGPVPHPAQSKATEAGGGNPSGIYSAIISRNFP IIGVKEKTFEQLHKKCLEKKVLY  
VDPEFFPPDETSLFYSQKFPIQFVWKRPEICENPRFIIDGANRTDICQGELGDCWFLAAIACLTINQHLLFRVIP  
HDQSFIENYAGIFHFQFWRYGEWVDVVIDDCLPTYNNQLVFTKSNHRNEFW SALLEKAYAKLHGSYEALKGGNTT  
EAMEDFTGGVAEFFEIRDAPSDMYKIMKKAIERGSLMGCSIDDGTNMTYGTSPSGLNMGELIARMVRNMDNSLLQ  
DSDLDPRGSDERPTRTIIPVQYETRMACGLVRGHAYSVTGLDEVFPFKGEKVKLVRLRNPWGQVEWNGSWSDRWKD  
WSFVDKDEKARLQHQTEDGEFWMSYEDFIYHFTKLEICNLTADALQSDKLQTTWTVSVNEGRWVRGCSAGGCRNF  
PDTFWTNPQYRLKLEEDDDPDDSEVICSFLVALMQKNRRKDRKLGASLFTIGFAIYEVPKEMHGKNQHLQKDFE  
LYNASKARSKTYINMREVSQRFRLPPSEYVIVPSTYEPHQEGEFILRVFSEKRNLSSEVENTISVDRPVKKKTK  
PIIFVSDRANSNKELGVDQSEEGKGKTSPDKQKQSPQPQPGSSDQSEEEQQQFRNIFKQIAGDDMEICADELKK  
VLNTVVNKKHDLKTHGFTLESCRSMIALMDTDGSGKLNQEFHHLWNKIKAWQKIFKHYD TDQSGTINSYEMRNA  
VNDAGFHLNNQLYDIITMRYADKHMNIDFDSFICCFVRLEGMFRAFHFDDKDGDIKLNVLWLQLTMYA

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## FIGURE 4163A

CAACAATTTATAGAATTGGATTGAAAGTGCCACCTGATGAAAGGGATCCTCGAGTCCCCATGCTGACCTGGAGCA  
CCTGCGCTTTACTATCCAGGCAATTGAAAATCTATTGGGAGATGAAGGAAAACCTCTGTTTGGAGCACTTCAAA  
ATAGGCAGCATAATGGTCTGAAAGCATTAAATGCAGTTTGCAGTTGCACAGAGGATTACCTGTCTCAGGTCCTGA  
TACAGAAACATCTGGTTCGTCTTCTATCAGTTGTTCTTCTTAACATAAAATCAGAAGATACACCATGCCTTCTGT  
CTATAGATCTGTTTCATGTTTTGGTGGGTGCTGTGTTAGCATTCCCATCCTTGTATTGGGATGACCCTGTTGATC  
TGCAGCCTTCTTCAGTTAGTTCTTCTATAACCACCTTATCTCTTCCATTTGATCACCATGGCACACATGCTTC  
AGATACTACTTACAGTAGACACAGGCCACCCCTTGCTCAGGTTCAAGAAGACAGTGAAGAGGCTCATTCCGCAT  
CTTCTTTCTTTGTCAGAAATTTCTCAATATACAAGTGGCTCCATTGGGTGTGATATTCTGGCTGGTATTTGTGGG  
TCTCACTGAAGAATGGCATCACCCCTTATCTTCGCTGTGCTGCATTGTTTTTCCACTATTTACTTGGGGTAACCTC  
CGCTGAGGAAGTGCATACCAATTCTGCAGAAGGAGAGTACAGTGCACCTCTGTAGCTATCTATCTTTACCTACAA  
ATTTGTTCTGCTCTTCCAGGAATATTGGGATACTGTAAGGCCCTTGCTCCAGAGGTGGTGTGCAGATCCTGCCT  
TACTAAACTGTTTGAAGCAAAAAACACCGTGGTCAGGTACCCTAGAAAAAGAAATAGTTTGATAGAGCTTCTCTG  
ATGACTATAGCTGCCCTCTGAATCAAGCTTCTCATTTCAGGTGCCACGGTCTGCAGATGATGAGCGAAAGCATC  
CTGTCTCTGCCCTTTCTGTGGGGCTATACTATGTTCTCAGAACATTTGCTGCCAGGAAATTTGTAACGGGGAAG  
AGGTTGGAGCTTGCATTTTTACGCACCTTCACTGTGGAGCCGGAGTCTGCATTTTCTAAAAATCAGAGAATGCC  
GAGTGGTCTGTTGAAGGTAAAGCCAGAGGCTGTGCCATCCAGCTCCTTACTTGGATGAATATGGAGAAACAG  
ACCTTGGCCTGAAGAGGGGCAACCCCTTCATTTATCTCGTGAGCGGTATCGGAAGCTCCATTGGTCTGGCAAC  
AACACTGCATTATAGAAGAGATTGCTAGGAGCCAAGAGACTAATCAGATGTTATTGGATTCAACTGGCAGTTAC  
TGTGAGCTCCAACCTGCCTCAAGACAATCACAATGACGACAGTAGTAAAGGCTGATTCAAAATATGGAAAC  
TTTCTGAGGGCTGGGAAAGTATTGGAGGGTCTTTTGCTCCATGTCCAGGTTCACTTACATCAATAAAATATTTCT  
TAATGGAGTATTGCTTTCAATTAGCAACATATGCTTACAGGAAAAAGGACATAGATCAATCTGTTTTATGTG  
CTAGTATTTCCAGGAATTTATTTCCCTTCATAATTTGTCCTATTTCAATTTATTTATCCACTGGTAGATGAAG  
TCACGTCAAACAGTTGTAGACATTTTATATGTTGGTTAACTCTTCTGCAATTTGTATTGGTGTCTTCCCCCA  
AGTTTAGTTCAACTGACATTGGATCACTGACAAAATCTAATAATCTGTGATAGTCTTCTTGCAGTTAAAGAAG  
AATTGCAGAAACCATGCAATATACTTGGGAAAGATTCCAAAAATAAATTTTTATTATTTCTTTAAGGAAAT  
ACCCCTAATGTGCCACCTGCTGCTATCACCACAAATTAACCTCAATCTCTATGTGGACAGAGGATGATTTCTGCC  
AATATGGAAAGCTTTTTTCTCACTGTAGGCCTCAAGAAAGTTAGGGTAATGTATTGTTATTCACTCTGACG  
GTACAAAGAGCTTGAGTTCTCACCTCTGACTACCAGTAGCTTTGTTGAGTTTGAAATAAATACTTGACATTTTC  
CAAAGGCAAATCTCATTCTGCAAGGAGATTGTGGCACCATCCTGTTTGACTCTCAGAAACCTCTGTAAATCTGA  
TGTA AAAACTGTAGAATGAAGATGAGAAAATCTCGCAATGAGTGGATCATGACAACGTAAATAGAACAAATCA  
GATTTAAACCAATTCGCAGTCTTCTATATCTTTGTAAAAGACAAATCCTTGATGTTGTCTGTGTGCAACCTTTT  
CATAACTCTGGTTTTATGACTAGTACAAACCACCAAAAAAGCCATGTGATCAATAGTCTGTGCTGTTTATAAC  
ATGCTGTGGTTGAGCCATCTTGTTTATAAATAATAGAGCTCTCCTGAATTTGTGCATAGACTTCTTGGTTCTCGG  
CTTTTGTTTTTTTGTATCAAGAGATTGTGATATAAAACAGCAGAAGATAAATGGAAACCTTCCATTTTAACTTACG  
TTGTTTCTGGGGTAAATGTTAGAACCTTGAAAGATGCATTCAAAGACTGTATCTTATTTGGCCTTGGCTATTAGT  
GTCTCACATATGTGTGTAATGTTTTCTTACCTTCTTTTGTCTCAGCAAAGGCAAGCAAGTAAATATATTTGCT  
AAGTGATTAGTGTATGCACATTTGGGGCTAGATTTTTTGGTACTTTTATGTAAAGAAAAGTGGATTTTGAGTAA  
GGGATTGGCATGAGCAGGCGTCAGAATCACAATCATGATTTTCTACTTGAATAATTACAATTCAGAAGGTATCTG  
GATAAATAGATACATGTCTAGTGAACAATTTGTAACAATAACAGGTAAGGATCAGGAAATTCAGTATTCAGTTTG  
TCAGATTTGCCAGAAATGATGAAAGTATTGAACATGTGTGTTGTTTCTTATATAATTGTATTGAGTGGATTGTT  
TGACTGGGAAATCTGGGCTAGAATAGGAAACAGAAGATACTGACTTCTACCTAATAGATGGGCCCCAATTTAGC  
AAAGATAAACTGACTTTATTTTTAGTCTTTTTATATTAACCTAATAAATCTGGAGTTAGGCTCTCAAGAGGAC  
AGAGGGACTGTCTGGCAATGGCCAGCCAGACCTTTACTGCCAAAGAACCCATTTCAATATGCGTTTCCACTGATTG  
AGATTGATTAGATTTTGCAGTGTAGATGAGCGTATGTCTCAGTGTGCCCCAAGCCCCAGGGATTTCTCATTA  
TGTTCAAAATGTCCTAGTGATTTACCTTAATCATTGCAAACAATTATGCTTATGAAGTTTACTTACAAACAAGCAA  
CTGAGTCACCTTTATTTCTTTAGTGTAGTATGTGAAGGCACTGGTTCAACAGGATGGCTCCAGAACTGTGTTTTT  
CTAATGTTTGGTAAGGGGCTAGTGAGAAATTTAATGATATGGTGAAGAAAAATATATCTGTATAATTAATTTATT  
ATATTGGTGTATGGGCTGTGAGTTCACCTTTTAGTGGTCATTTGTCAATTCATAACAACATATGCATTTTGGTTCA



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**FIGURE 4163B**

CTGTGATGATGATCTATATTTAGTGACTGCAACATGTTTATACCACTGATTCAAATTCATCCATGATGAAGTTA  
TACAAATAATGCATATATTGATAACTTTTATTGCAAAAATGTAAATTTAAACTTGTATAATGTTCTTGTGCTTT  
TTAAATAAAATATATGTGTATATTT

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**FIGURE 4164**

MAHMLQILLTVDTGLPLAQVQEDSEEHSASSFFAEISQYTSIGCDIPGWYLVVSLKNGITPYLRCAALFFHY  
LLGVTPEELHTNSAEGEYSALCSYLSLPTNLFLLFQEYWDTVRPLLQRWCADPALLNCLKQKNTVVRYPRKRNS  
LIELPDDYSCLLNQASHFRCPRSADDERKHPVLCFLCGAILCSQNICCQEIVNGEEVGACIFHALHCGAGVCIFL  
KIRECRVVLVEGKARGCAYPAPYLDEYGETDPGLKRGNPLHLSRERYRKLHLVWQQHCIIIEEIARSQETNQMLFG  
FNWQLL

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**FIGURE 4165**

CCTTTTGGCTCTCTGACCAGCACCATGGCGGTTGGCAAGAACAAGAGCCTTACGAAAGGCGGCAAAAAGGGAGCC  
AAGAAGAAAGTGGTTGATCCGTTTTCTAAGAAAAATTGGTATGATACGAAAGCACCTGCTATGTTCAATATATGA  
AATATTGGAAAGATGCTGGTCACCAGGACCCAAGGAACCAAAATTGCATCTGATGATCTCAAGGGTCATGTGTTT  
GAAGTGAGTCTTGCTGATTTGCAGAATGATGAAGTTGCATTTAGAAAATTCAAGCTGATTACTGAAGATGTTTCA  
GGTAAAAACTGCCTGACTAACTTCCATGGCATGGATCTTACCCGTGACAAAACGTGTTCCATGGTCAAAAAATGG  
CAGACAATGATTGAAGCTCATGTTGATGTCAAGACTACCGATGGTTACTTGCTTCATCTGTTCTGTGTTGGTTTT  
AATAAAAAACGCAACAATCAGATATGGAAGACCTCTTATGCTCAGCACCAACAGGTCCGCCAAATCCGGAAGAAG  
ATGATGGAAATCACGACCCGAGAGGTGCAGACTAATGACTTGAAAGAAGTGGTCAATAAATTGATTCCAGACAGC  
ATTGGAAGACATAGAAAAGGCTTGCCAATCTATTTATCCTCTCCGTGATGTCTTCGTTAGAAAAGTAAAAATG  
CTGAAGAAGCCCAAGTTTGAATTGGGAAGGCTCATGGAGCTTCATGGTGAAGGCAGTAGTTCTGGAAAAGCCACT  
GGGGATGAGACAGGTGCTAAAGTTGGACGAGCTGATGGATATGAACCACCAGTCCAAGAATCTGTTTAAAGTTCA  
GACTTCAAATAGTGGCAAATAAAAAGTGCTATTTGTGA

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**FIGURE 4166**

WRLARTRALRKAARKREPRRKWLIRFLRKIGMIRKHLCSYENIGKMLVTRTQGTKIASDDLKGHVFEVSLADLQ  
NDEVAFRKFKLITEDVQGKNCLTNFHGMDLTRDKTCSMVKKWQTMIEAHVDVKT TDGYLLHLFCVGFNKKRNNQI  
WKTSYAHQQVRQIRKKMMEITTREVQTNDLKEVVNKLIPDSIGKDIEKACQSIYPLRDVFVRKVKMLKKPKFEL  
GRLMELHGE GSSSGKATGDETGAKVGRADGYEPPVQESV

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## FIGURE 4167A

CACAACCGTGACAGACTGCCATTCTCTGAGTCTCTTCTGGCCATGGGCCCCGGAGCCGTGAGCGTCGGGCAGGCG  
CGGTACAGAACACCAACGACAGCAGCGCCCTCAGCAAGCGTTCCCTGGCCGCGCGGGGTACGTGCAGGACCCCT  
TTGCCGCGTTGCTGGTTCCGGGCGCGGCGCGCCGCGCACCCTCATTACCGAGGCTACTACGTCCGCGCACGCG  
CCGTGAGGCACTGCGTGCGCGCTTTTTTGGAGCAGATTGGCGCGCCCCAGGCCGCGCTTCGCGCGCAGATCTTGT  
CTCTCGGCGCTGGCTTCGACTCGCTCTATTTTCGCTTAAAAACCGGGGCCCTGGCCCGGCTGCAGTCTGGG  
AGGTGGATTTTCCGGACGTGGCGGGCGCAAAGCAGAAAGGATTGGAGAGACGCCAGAGCTGTGCGCGTTAACCG  
GGCCTTTCGAGAGGGGGGAGCCCGCTCCGCGCTGTGCTTTGAGAGCGCAGACTACTGCATCCTGGGTCTGGACT  
TGCGGCAGCTCCAGCGAGTGGAGGAGGCCCTGGGCGCGCGGGGCTCGACGCAGCCTCACCCACTCTGCTCCTGG  
CCGAGGCGGTGCTGACCTACCTCGAGCCGGAGAGTGCCGCGGGCCCTCATCGCCTGGGCAGCCAGCGTTTTCCTA  
ATGCCCTTTTCGTGGTCTATGAGCAGATGAGGCCCTCAAGACGCCCTTTGGCCAGTTCATGCTGCAACATTTTCGGC  
AGCTAAACTCCCCCTGCATGGCTGGAGCGTTTCTCTGACGTGGAGGCGCAGCGCGCGCTTCCCTCAAGCTG  
GCTGGACCGCTGCGGTGCCGTGGACATGAATGAATCTATCACTGCTTTCTTCCCGCAGAAGAACGCCGGCGGG  
TGGAAAATATTGAACCTTTGACGAATTTGAGGAGTGGCATCTGAAGTGGCGCCATTATTTCATTCTGGCAGCTT  
CTAGGGGAGACACCTCTCCACACCCCTAGTGTTCATCCTCAGAGGCATTTCTCGCGTAAATCCTGCTTCGC  
CTTCAGGGGTATTCCCTGCCAGCGTAGTCAGTAGCGAGGGCCAGGTCCCAAACCTGAAGAGATATGGCCACGCCCT  
CTGTCTTCTTGAGCCAGACGTTATTCTCAGTGCAGGAGGATTGGAGAGCAGGAGGGCGGCACTGCCGAGTGA  
GCCAGTTTCACTTGCTCTCAAGAGATTGTGACTCTGAATGGAAGGCAGCCAAATAGGCAGTTGTGGGACTGGAG  
TTCAGTGGGATGGACGCCTTTATCACACCATGACAAGACTCTCAGAGAGTCGGGTTCTGGTTCTGGGAGGGAGAC  
TGTCCCCAGTAAGTCCAGCCTTGGGGGTTCTCCAGCTTCATTTTTTAAGAGTGAGGATAATAACACTGAGGACC  
TGAAAGTGACAATAACAAAGGCTGGCCGAAAGGATGATTCCACTTTGTGTTGTGGCGGCATTCAACAACAGAAG  
TGTCTGTGCAATCAGGAATATTTGTTGTGTATGGGGGTCGAAGCGTGGTGGAACCTGTACTAAGTGAACCTGC  
ATTTCTCCATGTAGGGACAATGGCTTGGGTGAGGATCCAGTGGAGGAGAGTACCTGAAGCCCGGCATTCTC  
ACAGTGCCTGCACTTGGCAAGGGGAGCCCTTATTGCTGGAGGTCTCGGGGCTTCTGAGGAGCCATTGAACCTG  
TGCTCTTTCTGAGACCAATCTCTTGTGGATTCTCTGGGAGTCACTAGACATCCAGCCTCCCAATTACCCCAAGT  
ACTCCACACAGCTCATGTGCTCAATGGAAAGCTGTTACTGGTTGGAGGATCTGGATTCACTTCTCTCATTTT  
CTGGAGTGACTGTGATCAATTTGACTACAGGATTGAGCTCTGAGTATCAGATTGACACAACATATGTCCATGGC  
CATTAAATGTTACACAACCATACTAGTATCCTTCTTCTGAAGAGCAACAGCTCCTGCTCCTTGGAGGTGGTGGGA  
ACTGCTTTTCTTTGGTACCTACTTCAACCCCCATACAGTCACATTAGACCTTTCTTCTTAAGTGTGGGCAGT  
AAGGACTGGACTAATATTAGGACCCACTAAAGTAGACAATAAAGTTTTCCACAATAGGATGACCCTCTAGCTA  
TAGATACTGCCACICCTCCTTTCCCATCCTTTTTTCCCTTAGCACTATTCAGTGCAAAAAGTGAAAAAGGTTG  
GTAAATAGGTAAATACCTAGAAACAATCACTACAGAAAACAGCTGAAGACAGTGGCCATGCAGTCCGAGAGGA  
GTAGTGGTCTGCCTCTAATTTCTAATCTAAGTTCTGTTATTGAGTTACAGTGGTCTTTAGTAAAGTAAACAAT  
TTCCCAATCCCAGGCCTTGTGATTGAGATGGTACCTTAGAAAAAGTTACACGCAGTTCGGTGGTTGAATATATT  
TGAGATGGTACCTTAGAAAAAGTTTCACGCAGATCCTTGGTTGAATATAGTTGAGGGAGCGTAGTATTGACAATT  
CTTCATGTAGGAAACCTGAAATGAACACAGTCACAGTTTGATTAAACATTGTCTGTTTGTGCAACAGAAAAAC  
TCGGATAGTTTTAAACACAGGAAACACTTGTAGGACTTCCCTTACCAACATACTTTTTAAATGTTTTGCTATTGG  
TTCCATATTTATTTAGATTTATAAGTGTCAATAAAGCAAACCTTTTGATGCCTCAATTCATTTGACGCGGGTATA  
ATAATGTTTTGTTCCAGATATACTCTCCACCTTTCACTGTTCTGTGCTCCAAGAGGCTGACCTTTATGGGCTGCA  
TCAAGGAGCTCTCTTTACTTTTTGGTTGAGTTCCACCAGTCAGAGGCACCAGAGGGGAATGGGGGCAAAAAGAAG  
AGTGAGAGTGAGTTGGTATTTATTTCCCAATTTCTTCCCTGTTGGTTTGCAAGTTGGCAGTGGCAGCATTTCTCTG  
TCAAAGGCTACAGCTCCTGCCGTGTAATCCTTTCTGAAGACAGAGTTCTAATTCTGCATCATCCAGGTTTCAG  
TAATGTTCTTTACTTCACCTTTTCAGGCCTAGGAGTTGTGATGGCTCTTTGCTAGACCTGAACGTGACTGTCC  
AATGTGGTAGCTATTGACAACATGTGACTATTTAAACGAATTAATAAATTCAGTGGCTTAGTCACATTGACCACA  
TTTTAAGTGCTTAATAACTATGTGTGGCTTTGGCTACTGTATTAGACAATGTAGATGTAGAACATTTTCATCGTTA  
CAGAAATTTCTACTGGACACTGCTGACTGGATATCTTGACTTGGTTTCCCTTAACCCTACTCAGCCCCCTTATAGT  
TAGCATCCCATTAACCTCAATTATCCCTTTAAATGGGAATCTGTTGCCTAGTGAGCCATGTGAGATCAATGAAA  
TAGCTATTTCATCCTTAAATTTGAGCCTTAATTTGTCTATCTAAATTATGCATACCTTGTGAATATACACCTCAA  
AAAAGTAGTGGCTTTGGTGGTAATAAGTGTATTACTTTAGTATTTCTTCTTAGTCCTAGAAACCTTAGTAGTTT

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**FIGURE 4167B**

TCATTCTACAAGTGCCTAAATGATTATTATGAACCATCATTGATGACAAATTGCATCCTTTATTTCTATTAATTT  
TGCATATAAATGGATGTGAAAGGTGATTAAATATAAAAACCAAGTAGCAAACACAAACCTAAGTGTATGGAGAGGA  
CAGTCTTGGCTCTGTTAGATGAAGCCTCCCCGGGGGAGACCAGCTGAATGAGGGTTGTGGTATAGGCTGGGCATG  
GTGGCTCACGCCTATAATTCCAGCACTTTGGGAGGCCAAGACAGAAGGATCACTTAAAGCCAGGAGTTTAAGACC  
AGCCCAGGCAACAAAGTCAGATCCCCATCTCTACAAAAAATAAGTAGGCACGGTGGTGTGTGCTTGTAGTCTTG  
GATACTCTGGAGGCTGAGGTGATAGTGAGCTGTGATTGTGCCACTGCACTCCTGCCTGGTTGACAGAGTGAGACC  
CCGTCTCTTAAAAAGAAAAAAAAAAAAAGGTTGTTGTCCAACCTTCAGCTTTCTGAGACTTTGTAAGAGCCATTTT  
TAGGGAAAGCAATTGGTTATGGCTATGACTGAGTCCTGGGAAACAGGGCTTATTACAGCTGGGAAGACATCTGGCA  
AGGCGATCAGTGGGCCAGGTAGTAGAAAACCTGGCAGGGAATATGATCAGCAGGAGAAAATGGCTGTTCTGTATTT  
CCTGTTTCTAAGTTTACTACAGCACACCCCAGCTTTTCAGGAGCAGATAAAAGCAGAACACTGTGATGAGGCCAGG  
CGCAGTGGCACATGCCTTGATCCCAGCACTTTGGGAGGCCAAGGCTGGCAGATCACTTGAACCTCAGGAGTTGGAG  
ACCAGCCTGGCCAATATGGTGAAACTCCGTCTCTACCCAAAAAAAAAAAAAAAAA

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**FIGURE 4168**

GAATGATCCACGAAGTCTCTTGGCTCTGAGCGGGTACCCTGGGTCCATTTTACCTGGAACAAGCGGAGTGGCC  
TGCAGGTATCGCAGGACTTCCCTTTCCCTCCACCCAGTGAGACCAGTGTCTGAATCGACTCTGCCGGCTCGGCA  
CAGACTATATTCGCTTCACTGAGTTCATTGAACAGTACACGGGCCATGTGCAACAGCAGGATCACCATCCATCTC  
AACAGGGCCAAGGTGGGTTACATGGAATCTACCTGCGGGCCTTCTGCACAGGGCTGGATTCTGTTTGCAGCCTT  
ATCGCCAAGCACTGCTTGATTGGAACAAGAGTTCCTGGGTGATCCCCATCTCTCCATATCACATGTCACTACT  
TCCTAGACCAGTTCAGCTTCTTTTCCCTCTGTGATGGTTGTAGTAGAACAAATTAAAAGTCAAAGATTTCATG  
GTTGTCAAATCCTGGAACAGTCTACAAACAGCTGTGGGGGGTTCCTCTGTTTGAAGTGCAGTGGAAAAA  
TCCTGSCCGTTTGTATGGGGTCATGTATAAACAGCTCTCAGCCTGGATGCTCCATGGACTCCTCTTGGACCAGC  
ATGAAGAATTCTTTATCAAACAGGGGCCATCTTCTGGTAATGTGAGTGGCCAGCCAGAGAGGACGAGGAGATC  
TGGGCATTGGGGGACTGACAGGAAAACAAGTGAAGAACTGCAGGACTTGGCCTGATTGAGGAAGAGAAATGC  
TGGCACCATCTCTGAAGCAGTTCCTTCCCTACGAGTGGAGATTTGCCATCCTACATTCCAGTGAGGGTGTCTGAA  
AAATCCTATTTGTTGGAGAATCTGTCCAGATGTTTGAAGATCAAATGTGAACCTGACTAGAAAAGGATCCATTT  
TGAAAAACCAGGAAGACACTTTTGTCTGCAGAGCTGCACCGTCTCAAGCAGCAGCCACTCTTCAGCTTGGTGGACT  
TTGAACAGGTGGTGGATCGCATTTCGACAGCACTGTGGCTGAGCATCTCTGGAAGTTGATGGTAGAAGATCCGATT  
TACTGGGTCAGCTGAAGATCATTAAAGACTTTTACCTTCTGGGACGTGGAGAACTGTTTCAGGCCCTTCATTGACA  
CAGCTCAACACATGTTGAAAACACCACCCACTGCAGTAAGTGAAGTGAATGTGGCCTTTCAACAGTCAG  
CACACAAGGTATTGCTAGATGATGACAACCTTCTCCCTCTGTTGCACTTGACAATCGAGTATCACGGAAGGAGC  
ACAAAGCAGATGCTACTCAGGCAAGAGAAGGGCCTTCTCGGGAACTTCTCCCGGGAAGCCCTGCATCTGGCT  
GGGCAGCCCTAGGTCTTTCTTACAAAGTACAGTGGCCACTACATATTCTCTTCAACCCAGCTGTCTGGAAGT  
ACAATGTTGTTTTTAAGTACTTACTGAGTGTGCGCCGGGTGCAAGCTGAGCTGCAGCACTGCTGGGCCCTACAAA  
TGCAGCGCAAGCACCTCAAGTCGAACCAAGTGAATCAAGTGGCGCCTAAGAAATCACATGGCATTTTTGG  
TGGATAATCTTCAGTACTATCTCCAGGTAGATGTGTGGAGTCTCAGTTCTCCAGCTGCTTCATCAGATCAATT  
CTACCCGAGACTTTGAAAGCATCCGATTGGCTCATGACCACTTCTCTGAGCAATTTGCTGGCTCAATCCTTTATCC  
TATTGAAACCTGTGTTTCACTGCCTGAATGAAATCCTAGATCTCTGTACAGTTTTTGTTCGCTGGTCAGTCAGA  
ACCTAGGCCCACTGGATGAGCGTGGAGCCGCCAGCTGAGCATTCTCGTGAAGGGCTTTAGCCGCCAGTCTTCAC  
TCCTGTTCAAGATTCTCTCCAGTGTTCGGAATCATCAGATCAACTCAGATTGGCTCACTACTGTTACGACTAG  
ATTATAACAAATACTATAACCCAGGCTGGTGGAACTCTGGGCAGTTTCGGGATGTA

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**FIGURE 4169**

MIHELLLALSGYPGSIFTWNKRSGLQVSQDFPFLHPSETSVLNRLCRLGTDYIRFTEFIEQYTGHVQQQDHHFSQ  
QQQGGLHGIYLRAFCTGLDSVLQPYRQALLDLEQEF LGDPHLSISHVNYFLDQFQLLFPSVMVVVEQIKSQKIHG  
CQILETVYKHSCGGLPPVRSALKILAVCHGVMYKQLSAWMLHGLLLDQHEEFFIKQGPSSGNVSAQPEEDEDL  
GIGGLTGKQLRELQDLRLIEENMLAPSLKQFSLRVEILPSYIPVRVAEKILFVGESVQMFENQNVNLTRKGSIL  
KNQEDTFAAELHRLKQQPLFSLVDFEQVVDRIIRSTVAEHLWKLMVEESDLLGQLKIIKDFYLLGRGELFQAFIDT  
AQHMLKTPPTAVTEHDVNVAFAQSAHKVLLDDDNLLPLLHTTIEYHGKEHKADATQAREGPSRETSPREAPASGW  
AALGLSYKVQWPLHILFTPAVLEKYNVVF KYLLSVRRVQAEHQHCWALQMQRKHLKSNQTD AIKWRLRNHMAFLV  
DNLQYYLQVDVLESQFSQLLHQINSTRDFESIRLAHDHFLSNLLAQSFILLKPVFHCLEILDLCFSFCSLVSQN  
LGPLDERGAAQLSILVKGFSRQSSLLFKILSSVRNHQINSDLAQLLRLDYNKYTTQAGGTGSGFGM



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**FIGURE 4170A**

CGTTGTTTGGCGTGTTTTTTTTTTTTGTGTTTTGTCACTGCCTGCCTGGGTCTGCCCAGAGTCTCCATCCTCGGT  
TTCCCTGTCTTGGCCCCGGGCCCTGGGAGTGCTCTGGAAGGCTGCGCAGTATTGGAGGGGACAGAATGACCTTCC  
GGCCTTGAGTCCCTGGGGAGCAGATGGACCCTACTGGAAGTCAGTTGGATTTCAGATTTCTCTCAGCAAGATACTC  
CTTGCTGATAATTGAAGATTCTCAGCCTGAAAGCCAGGTTCTAGAGGATGATTCTGGTTCTCACTTCAGTATGC  
TATCTCGACACCTTCTAATCTCCAGACGCACAAAGAAAATCCTGTGTGGATGTTGTGTCCAATCCTGAACAAA  
CAGCTGGAGAAGAACGAGGAGACGGTAATAGTGGGTTCAATGAACATTTGAAAGAAAACAAGGTTGCAGACCCTG  
TGGATTCTTCTAAGTGGACACATGTGGTTCCATCAGTCAGGTCATTGAGCAGTTACCTCAGCCAAAACAGGACAA  
GCAGTGTTCTGGGAATGTCAGTGGAACTGTCTCCTGTGTGGAGGAAGAGAAGGGAGAAGAGTTGGAACAGAAGG  
AGAAAGAGAAGGAAGAAGATACTTCAGGCAATACTACACATTCCCTTGGTGCTGAAGATACTGCCTCATCACAGT  
TGGGTTTTGGGGTTCTGGAACCTCTCCAGAGCCAGGATGTTGAGGAAAATACTGTGCCATATGAAGTGGACAAAG  
AGCAGCTACAATCAGTAACCACCAACTCTGGTTATACCAGGCTGTCTGATGTGGATGCTAATACTGCAATTAAGC  
ATGAAGAACAGTCCAACGAAGATATCCCATAGCAGAACAGTCCAGCAAGGACATCCCTGTGACAGCACAGCCCA  
GTAAGGATGTACATGTTGTAAGAGAGCAAAATCCACCACCTGCAAGGTCAGAGGACATGCCCTTTAGCCCCAAAG  
CATCTGTTGCTGCTATGGAAGCAAAAGAACAGTTGCTGCAAGAAGTTATGGAAGTGGACTGCAGATTTCAGA  
AGTCACCAGAGCCTGAGGTTTTGTCACTCAGGAAGACTGTTTGACCAGAGCAATAAAACAGTATCTTCTGATG  
GTTGCTCTACTCCTTCAAGGGAGGAAGGTGGGTGTTCTTGGCTTCCACTCCTGCCACCCTCTGCATCTCCTGC  
AGCTCTCTGGTCAGAGGTCCCTTGTTCAGGACAGTCTTCCACGAATTCTTCAGATCTTGTGCTCCTTCTCCTG  
ATGCTTTCCGATCTACTCCTTTTATCGTTCTAGCAGTCCCACAGAGCAAGAAGGGAGACAAGATAAGCCATGG  
ACACGTCAGTGTATCTGAAGAAGGAGGAGAGCCTTTTCAGAAGAACTTCAAAGTGGTGAACCAAGTGGAGTTAG  
AAAACCCCCCTCTCCTGCCTGAGTCCACTGTATCACCACAAGCCTCAACACCAATATCTCAGAGCACACCAGTCT  
TCCCTCCTGGGTCACTTCTATCCCATCCCAGCCTCAGTTTTCTCATGACATTTTATTCTTCCCCAAGTCTGG  
AAGAACAATCAAAATGATGGGAAGAAAGATGGAGATATGCATAGTTCACTTTGACAGTTGAGTGTCTAAACTT  
CAGAGATTGAACCAAGAATTCCCTGAGGATCTTGGGCTATCTTTGACAGGGGATTCTTGCAAGTTGATGCTTT  
CTACAAGTGAATATAGTCAGTCCCCAAAGATGGAGAGCTTGAGTTCTACAGAATTGATGAAGATGGAGAAAACA  
CACAGATTGAGGATACGGAACCCATGTCTCCAGTTCTCAATTCTAAATTGTTCTCTGCTGAAAATGATAGTATCC  
TGATGAATCCAGACAGGATGGTGAAGTACAAGTCAAGTCAAGTATGACAAAACAAAGGGAGATGATACAGACA  
CCAGGGATGACATTAGTATTTTAGCCACTGGTTGCAAGGGCAGAGAAGAAACGGTAGCAGAAGATGTTGTATTG  
ATCTCATTGTGATTGCGGGAGTCAGGCAGTTCCGTACCCAGCTACTCGATCTGAGGCATTTCTAGTGTGTTAG  
ATCAGGAGGAAGCTATGGAATTAAGAACACCATCCAGAGGAGGGGTCTTCAGGGTCTGAGGTGGAAGAAATCC  
CTGAGACACCTTGTGAAAGTCAAGGAGAGGAACCTCAAGAAGAAAATATGGAGAGTGTTCGGTTGCACCTTTCTC  
TGACTGAAACTCAGTCCCAAGGTTGTGTCTTCAAGGAAATGCCAAAAAAGAATGCTCAAGACTATGGAAG  
TTGAAACCAGTGTGATTAGTATTGATTCCCCTCAAAGTTGGCAATACTTGACCAAGAATTGGAACATAAGGAAC  
AGGAAGCTTGGGAAGAAGCTACTTCAGAGGACTCCAGTGTGTGCTATTGATGTGAAAGAGCCATCTCCCAGAG  
TTGATGTTTCTTGTGAACCTTTGGAGGGAGTGGAGAAGTGCTCAGATTCCAGTCATGGGAGGATATTGCTCCAG  
AAATAGAACCATGTGCTGAGAATAGATTAGACACCAAGGAAGAAAAGAGTGATAGATATGAAGGAGATCTGAAAT  
CAGGGACTGCAGAAACAGAACCCTGTAGAGCAAGATTCTTCAGACCTTCTTTACCTTTAGTGAGAGCAGATGATC  
CTTTAAGACTTGACCAGGAGTTGCAGCAGCCCCAACTCAGGAGAAAAACAAGTAATTCATTAACAGAAGACTCAA  
AAATGGCTAATGCAAAGCAGCTAAGCTCAGATGCAGAGGCCCAGAAGCTGGGGAAGCCCTCTGCCCATGCCTCAC  
AAAGCTTCTGTGAAAGTTCTAGTGAAACCCATTTTCATTTCACTTTGCCTAAAGAAGGTGATATCATCCACCAT  
TGACTGGTGCAACCCACCTCTTATTGGGCACCTAAAATTGGAGCCCAAGAGACACAGTACTCCTATTGGTATTA  
GCAACTATCCAGAAAGCACCATAGCAACCAGTGATGTCTGAAAAGCATGGTGGAGACCCATGATCCCATAC  
TTGGGAGTGGAAAAGGGGATTCTGGGGCTGCCCCAGAGCTGGATGATAAATTATGTCTAAGAATGAACTGGTTA  
GTCCTGAGACTGAGGCGAGTGAAGAGTCTTTCAGTTCAACCTGGAAGGCTGCAACTGGTGAAAGAAAAAATG  
GATCTACTGCTGTTGCTGAGTCTGTTGCCAGTCCCCAGAAGACCATGTCTGTGTTGAGCTGTATCTGTGAAGCCA  
GGCAAGAGAATGAGGCTCGAAGTGAGGATCCCCCACCACACCCATCAGGGGGAAGTTGCTCCACTTTCCAAGTT  
CTCAAGGAGAAGAGGAGAAGAAAAATTGGAGGGTGACCATACAATCAGGCAGAGTCAACAGCCTATGAAGCCCA  
TTAGTCTGTCAAGGACCTGTTTCTCCTGCTTCCAGAAGATGGTCATACAAGGGCCATCCAGTCTCAAGGAG  
AGGCAATGGTGACAGATGTGCTAGAAGACCAGAAAGAAGGACGGAGTACTAATAAGGAAAAATCTAGTAAGGCCT

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**FIGURE 4170B**

TGATTGAAAGGCCAGCCAAAATAACATAGGAATCCAAACCATGGAGTGTTTCCTTGAGGGTCCCAGAACTGTTT  
CAGCAGCAACCCAGACTATAAAGAATGTGTGTGAGCAGGGGACCAGTACAGTGGACCAGAACTTTGGAAAGCAAG  
ATGCCACAGTTCAGACTGAGAGGGGGAGTGGTGAGAAACAGTCAGTGCTCCTGGGGATGATACAGAGTCGCTCC  
ATAGCCAGGGAGAAGAAGAGTTTGATATGCCCTCAGCCTCCACATGGCCATGTCTTACATCGTCACATGAGAACAA  
TCCGGGAAGTACGCACACTTGTCACTCGTGTTCATTACAGATGTGTATTATGTGGATGGAACAGAAGTAGAAAGAA  
AAGTAACTGAGGAGACTGAAGAGCCAATTGTAGAGTGTGAGGAGTGTGAACTGAAGTTTCCCCTTCACAGACTG  
GGGGCTCCTCAGGTGACCTGGGGGATATCAGCTCCTTCTCCTCCAAGGCATCCAGCTTACACCGCACATCAAGTG  
GGACAAGTCTCTCAGCTATGCACAGCAGTGGAAAGCTCAGGGAAGGAGCCGGACCACTCAGAGGGAAAACAGCG  
GGACAGAACCCGCAGATTTTGCCTTACCCAGCTCCCGAGGAGGCCAGGAAAACCTGAGTCCTAGAAAAGGGGTCA  
GTCAGACAGGGACGCCAGTGTGTGAGGAGGATGGTGATGCAGGCCTTGGCATCAGACAGGGAGGGAAGGCTCCAG  
TCACGCCTCGTGGGCGTGGGCGAAGGGGCGGCCACCTTCTCGGACCACTGGAACCAGAGAAACAGCTGTGCCTG  
GCCCCCTTGGGCATAGAGGACATTTACCTAACTTGTCAACAGATGATAAATCCTTCAGCCGTGTGTCGCCCGAG  
TGCCAGACTCCACCAGACGAACAGATGTGGGTGCTGGTGCTTTGCGTCGTAGTGAATCTCCAGAAATCCTTTCC  
AGGCTGCTGCTGGCCCTTCTGATGGCTTAGATGCCCTCTCCTCAGGAAATAGCTTTGTAGGGCTCCGTGTTGTAG  
CCAAGTGGTCAATCAATGGCTACTTTTACTCTGGGAAAATCACACGAGATGTCGGAGCTGGGAAGTATAAATGTC  
TCTTTGATGATGGGTACGAATGTGATGTGTTGGGCAAAGACATTCTGTTATGTGACCCCATCCCGCTGGACACTG  
AAGTGACGGCCCTCTCGGAGGATGAGTATTTAGTGCAGGAGTGGTGAAAGGACATAGGAAGGAGTCTGGGGAAC  
TGTAATACAGCATTGAAAAAGAAGGCCAAAGAAAGTGGTATAAGCGAATGGCTGTCTCCTGTCTGGAGCAAG  
GAAACAGACTGAGAGAGCAGTATGGGCTTGGCCCTATGAAGCAGTAACACCTCTTACAAAGGCAGCAGATATCA  
GCTTAGACAATTTGGTGGAAGGGAAGCGGAAACGGCGCAGTAACGTGAGCTCCCCAGCCACCCCTACTGCCTCCA  
GTAGCAGCAGCACAAACCCCTACCCGAAAGATCACAGAAAGTCTCGTGCCCTCCATGGGAGTTCTCTCAGGCAAAA  
GAAAACCTTATCACTTCTGAAGAGGAACGGTCCCCTGCCAAGCGAGGTGCAAGTCTGCCACAGTAAAACCTGGTG  
CAGTAGGGGCAGGAGAGTGTGTGAGCCCTGTGAGAGTGGAGACAACACCGGTGAACCCCTTGCCCTGGAAGAGC  
AGAGAGGGCCTTTGCCTCTCAACAAGACCTTGTTTTCTGGGCTACGCATTCTCCTTACCATGGCCACAACCACTG  
ACAAGTTGGCCAGCCGCTCCAAACTGCCAGATGGTCTTACAGGAAGCAGTGAAGAAGAGGAGGAATTTTTGGAAA  
TTCTCTCTTTCAACAAGCAGTATACAGAATCCCAGCTTCGAGCAGGAGCTGGCTATATCCTTGAAGATTTCAATG  
AAGCCAGTGTAACACAGCTTACCAGTGTCTTCTAATTGCGGATCAGCATGTGCGAACCCGGAAGTACTTCTGT  
GCCTTGCCAGTGGGATTCTTGTGTGTCTCATGTCTGGGTCCATGATAGTTGCCATGCCAACCAGCTCCAGAACT  
ACCGTAATTATCTGTGTCAGCTGGGTACAGCCTTGAGGAGCAAAGAATTCTGGACTGGCAACCCCGTGAAATC  
CTTTCAGAACTCTGAAGGTACTCTTGGTATCAGACCAACAGCAGAACTTCTGGAGCTCTGGTCTGAGATCCTCA  
TGACTGGTGGTGACGACCTCTGTGAAGCAGCACCATTCAAGTGCCATAACAAAGATATTGCTTTAGGGGTATTTG  
ATGTGGTGGTGACGGACCCCTCATGCCAGCCTCGGTGCTGAAGTGTGCTGAAGCATTGCAGCTGCCTGTGGTGT  
CACAAGAGTGGGTGATCCAGTGCCTCATTGTTGGGGAGAGAATTGGATTCAAGCAGCATCCAAAATATAAACAG  
ATTATGTTTCTCACTAAAGATACTTGGTCTTACTGGTTTTATTCCCTGCTATCGTGAGATTGTGTTTTAACAG  
GTTTTAAATGTGTCTTGTGTGTAAGTGGATTTCCTTGCATGGATCTTGTATATAGTTTTATTGCTGAACTTTTAT  
GATAAAATAAATGTTGAATCTCTTTGGTGTAGTAACTGGG

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**FIGURE 4171**

MDPTGSQLDSDFSQQDTPCLIIEDSQPESQVLEDDSGSHFSMLSRHLPLNLQTHKENPVLDDVSNPEQTAGEERGD  
GNSGFNEHLKENKVADPVDSSNLDTCGSISQVIEQLPQPNRTSSVLGMSVESAPAVEEEKGEELEQKEKEKEEDT  
SGNTTHSLGAEDTASSQLGFGVLELSQSQDVEENTVPYEVKDQEQLSVTTNSGYTRLSDVDANTAIEHEEQSNED  
IPIAEQSSKDIPVTAQPSKDVHVVEQNPPPARSEDMPFSPKASVAAMEAKEQLSAQELMESGLQIQKSPEPEVL  
STQEDLFDQSNKTVSSDGCSTPSREEGGCSLASTPATTLLHLLQLSGQRSLVQDSLSTNSSDLVAPSPDAFRSTPF  
IVPSSPTEQEGRQDKPMDTSVLSEEGGEPFQKKLQSGEPVELENPPLLPESTVSPQASTPISQSTPVFPFPGSLPI  
PSQPQFSDHIFIPSPSLEEQSNKGKGDGMHSSSLTVECSKTSEIEPKNSPEDLGLSLTGDSCKLMLSTSEYSQS  
PKMESLSSHRIDEDGENTQIEDTEPMSPVLNSKFVPAENDSILMNP AQDGEVQLSQND DKTKGDDTDTRDDISIL  
ATGCKGREETVAEDVCIDLTCDSGSQAVPSPATRSEALSSVLDDQEEAMEIKEHHPEEGSSGSEVEEIPETPCESQ  
GEELKEENMESVPLHLSLTETQSQGLCLQKEMPKECSEAMEVETSVISIDSPQKLAILDQELEHKEQEAWEET  
SEDSSVVIVDVKEPSPRVDVSCPELEGVEKCDSDSQSWEDIAPEIEPCAENRLDTKEEKSVEYEGDLKSGTAETEP  
VEQDSSQPSLPLVRADDPLRLDQELQQPQTQEKTSNLTEDSKMANAKQLSSDAEAQKLGKPSAHASQSFCESSS  
ETPFHFTLPKEGDIIPPLTGATPPLIGHLKLEPKRHSTPIGISNYPESTIATSDVMSESMVETHDPIILGSGKGDS  
GAAPDVDDKLCRLMKLVSPETEASEESLQFNLEKPATGERKNGSTAVAESVASPQKTM SVLSCICEARQENARS  
EDPPTTPIRGNLLHFPSSQGEKEKELEGDHTIRSQSQPMKPI SPVKDPVSPASQKMVIQGPSSPQGEAMVTDVL  
EDQKEGRSTNKENPSKALIERPSQNNIGIQTMECSLRVPETVSAATQTIKNVCEQGTSTVDQNFQKQDATVQTER  
GSGEKPV SAPGDDTESLHSQGEFEFDMPPHGHVLRHMRTIREVRTLVITRVITDVYYVDGTEVERKVTEETEE  
PIVECQECETEVSPTSQTGGSSGDLGDISSFSKASSLHRTSSGTSLSAMHSSGSSGKAGPLRGKTSGETPADFA  
LPSSRGGPGKLSPRKGVSTGTPTVCEEDGDAGLGIRQGGKAPVTPRGRGRGRPPSRTTGTRETAVPGPLGIEDI  
SPNLSPDDKSF SRVVRVPDSTRRTDVGAGALRRSDSPEIPFQAAAGPSDGLDASSPGNSFVGLRVVAKWSSNGY  
FYSGKITRDVGAGKYKLLFDDGYECDVLGKDILLCDPIPLDTEVTALSEDEYF SAGVVKGHRKESGELYYSIEKE  
GQRKWKYKMAVILSLEQGNRLREQYGLGPYEAVTPTLTKAADISLDNLVEGKRKRNSNVSSPATPTASSSSSTPT  
RKITESPRASMGVLSGKRKLITSEERSPAKRGKRSATVKPGAVGAGEFVSPCESGDNTGEPSALEEQRGPLPLN  
KTLFLGYAFLLT MATTSK LASRSKLPDGPTGSSEEEEFLEIPFNKQYTESQLRAGAGYILED FNEAQCNTAY  
QCLLIADQHCRTRKYFLCLASGIPC VSHVWVHDSCHANQLQNYRNYLLPAGYSLEEQRILDWQPRENPFQNLKVL  
LVSDQQNFLELWSEILMTGGAASVKQHHSSAHNKDIALGVFDVVVTDPSCPASVLKCAEALQLPVVSQEWVIQC  
LIVGERIGFKQHPKYKH DYVSH

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**FIGURE 4172**

CCGGCTCCCATTCGGGCTCCAGCCTCCAATCCGACCCCCATTTCGGCTGCAGCCTCGGACCTAGCTCCGGCCCTC  
GGTCTATCCGGTTGCATCCTCCCTCCCTGTTCCGGATCTTATCTTGCGCCAGCGCCTACTCCAGGATCCCGTAGC  
CAGACCTCAAGCCATGCGTGGTCCCTTCTCCCGTCTGCTGTCCGCCCCGCCGGGACTCAGGCTCCTGGCTTTGGC  
CGGAGCGGGGTCTCTAGCCGCTGGGTTTCTGCTCCGACCGGAACCTGTACGAGCTGCCAGTGAACGACGGAGGCT  
GTATCCCCGAGCGCTGAGTACCCAGACCTCCGAAAGCACACAACACTGCATGGCCAGTCACCTGACCCCAGCAGT  
CTATGCACGGCTCTGCGACAAGACCACACCCACTGGTTGGACGCTAGATCAGTGTATCCAGACTGGCGTGGACAA  
CCCTGGCCACCCCTTCATCAAGACTGTGGGCATGGTGGCTGGAGATGAGGAGACCTATGAGGTATTTGCTGACCT  
GTTTGACCCTGTGATCCAAGAGCGACACAATGGATATGACCCCGGACAATGAAGCACACCACGGATCTAGATGC  
CAGTAAATCCGTTCTGGCTACTTTGATGAGAGGTATGTATTGTCCTCTAGAGTCAGAACTGGCCGAAGCATCCG  
AGGACTCAGTCTGCCTCCAGCTTGCACCTCGAGCAGAGCGACGAGAGGTGGAACGTGTTGTGGTGGATGCACTGAG  
TGGCCTGAAGGGTGACCTGGCTGGACGTTACTATAGGCTCAGTGAGATGACAGAGGCTGAACAGCAGCAGCTTAT  
TGATGACCACTTTCTGTTTGATAAGCCTGTGTCCCGTTGCTGACTGCAGCAGGAATGGCTCGAGACTGGCCAGA  
TGCTCGTGGAATTTGGCACACAATGAGAAGAGCTTCCTGATCTGGGTGAATGAGGAGGATCATAACGGGTGAT  
CTCCATGGAGAAGGGTGGTAACATGAAGAGAGTGTGTTGAAAGATTCTGCCGAGGCCTCAAAGAGGTGGAGAGACT  
TATCCAAGAACGTGGCTGGGAGTTTATGTGGAATGAGCGTTTGGGATACATCTTGACCTGTCCATCTAACCTGGG  
CACTGGACTTCGGGCAGGAGTGCACATCAAACCTGCCCCCTGCTAAGCAAAGATAGCCGCTTCCCAAAGATCCTGGA  
GAACCTAAGACTCCAAAAACGTGGTACTGGAGGAGTGGACACTGCTGCTACAGGCGGTGTCTTTGATATTTCTAA  
TTTGACCGACTAGGCAAATCAGAGGTGGAGCTGGTGCAACTGGTCATCGATGGAGTAACTATTTGATTGATTG  
TGAACGGCGTCTGGAGAGAGGCCAGGATATCCGCATCCCCACACCTGTATCCACACCAAGCATTAACCTCCCAT  
CGCCAGCTGATGACTCAAGATTCCCAGGAGTTTGTCTATTCTAATGATGGCCCATTTCTACTTGCTCTGGACCTG  
CCCCGCATCCCTGCCTCCATCCTAGT

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**FIGURE 4173**

MAGPFSRLLSARPGRLRLLAGAGSLAAGFLLRPEPVRAASERRRLYPPSAEYPDLRKHNNCMAHSLTPAVYARL  
CDKTTPTGWTLDQCIQTGVDPNGHPFIKTVGMVAGDEETYEVFADLFDVPIQERHNGYDPRTMKHTTDL DASKIR  
SGYFDERYVLSSRVRTGRSIRGLSLPPACTRAERREVERVVVDALSGLKGDLAGRYRLSEMTEAEQQQLIDDHF  
LFDKPVSPLLTAAGMARDWPDARGIWHNNEKSFLIWNNEEDHTRVISMEKGGNMKRVFERFCRGLKEVERLIQER  
GWEFMWNERLGYYLTCPNSNLGTGLRAGVHIKLPLLSKDSRFPKILENLRLOKRGTTGGVDTAATGGVFDISNLDRL  
GKSEVELVQLVIDGVNYLIDCERRLERGQDIRIPTPVIHTKH

**FIGURE 4174**

[illegible]

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**FIGURE 4175**

MRLRRLALFPGVALLLAAARLAAASDVLELTDDNFESRISDTGSAGLMLVEFFAPWCGHCKRLAPEYEEAAATRLK  
GIVPLAKVDCTANTNTCNKYGVSGYPTLKIFRDGEEAGAYDGPRTADGIVSHLKKQAGPASVPLRTEEEFKKFIS  
DKDASIVGFFDDSFSEAHSEFLKAASNLRDNYRFAHTNVESLVNEYDDNGEGIIIFRPSHLTNKFEDKTVAYTEQ  
KMTSGKIKKFIQENIFGICPHMTEDNKDLIQGKDLLIAYYDVDEKNAKGSNYWRNRVMMVAKKFLDAGHKLNFA  
VASRKTFSHELSDFGLESTAGEIPVVAIRTAKEKFVMQEEFSRDGKALERFLQDYFDGNLKRYLKSEPIPESND  
GPVKVVVAENFDEIVNENKDVLIIFYAPWCGHCKNLEPKYKELGEKLSKDPNIVIAKMDATANDVPSPYEVRGF  
PTIYFSPANKKLNPKKYEGGRELSDFISYLQREATNPPVIQEEKPKKKKKAQEDL

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**FIGURE 4176**

GGCACGAGGCGGGCCAAACCGCCCCGACCTCGGCGCTTTCTTCTAGGATCCGCATGAATCGCTTTGGGCTATCGGA  
AGAGCTATCCCCAGTTCTCGGGAGAAAGAGTCCGCGACACAGCGTCTGACCTCTCACTCAGAGTCCCCAGTCCTGC  
CTTAGTTTCCCCAGCGACCCCTGAATTTGGAGTTGCTGTCTCTAAGTGAAAGCTGAACCTGCAACCCCTTGAGGGT  
TTCAGCCGCAGAGGGGCGGGAGAAAGGGCCTGGTTGGTAGGCGGGCTCAGCGGTTTCGCGCCAGTTAGCCCCGAG  
CTTCGGAGACCCGAGAGACCAGAGGATGGCTGACACGAAGGGGCACCCGAGACAGCGCTGGGCTTTTTCCCGCC  
CGCGGTTCCACCGCTCTGAAACCGATTTCTAACAGAGAGAGACATAGTCTTGCTCTGTTACCCATGCTGGAGTAC  
GGTGGCGAGATCACGACTCACTACAACCTTTGAATTCCTGGATTCAAGCAATCCTCCCATCTCAGCCTCCTGAGTA  
GCTAAGGACTACAGGGCGACTTTGTCTAGTACCCCAAAGTGTCCCGCATGAGGTCACTCTGCACGGTCACGTGCT  
CGAGCCCGCGGGAGCGCCACATCGCCAGCCGCACCCCTCCACCCCAACCTGCCCCACGTGACCCGGCCTAGTTTC  
TCCAGGCCCCGTCCCTACGTCTCACTCGGGAAGCCCCGCCCCACGCTGAGCGCTCCGCTGCGACCCCTCCGCCACT  
TACCCACCCCGGCTCAAGCACGACCCGTGGATCCACGTGCTTTTTCTTGTCATGAGGAGCCGGCTCCCGGGCGC  
GAAGGGGCGGGGAGGAAAGGAACGACTGTGCTACGTTGCCAGAAGGGGCGGGACCTGCAACGTCCGACAGAACGA  
GGGGACGTAACGGAGGCAGGTTGGAGCCGCTGCCGTGCGCATGACCCGCGGTAACCAGCGTGAGCTCGCCCCGCA  
GAAGAATATGAAAAAGCAGAGCGACTCGGTTAAGGGAAAGCGCCGAGATGACGGGCTTTCTGCTGCCGCCGCAA  
GCAGAGGGACTCGGAGATCATGCAGCAGAAGCAGAAAAAGGCAAACGAGAAGAAGGAGGAACCAAGTAGCTTTG  
TGGCTTCGTGTCCAACCCTCTTGCCCTTCGCTGTGTGCTGAGCCAGTCCACACGCTCGCGTTTCTCCTG  
TAGTGCTCACAGGTCCAGCACCGATGGCATTCCCTTTGCCCTGAGTCTGCAGCGGGTCCCTTTTGTGCTTCCTT  
CCCCTCAGGTAGCCTCTCTCCCCCTGGGCCACTCCCGGGGTGAGGGGGTTACCCCTTCCAGTGTTTTTTATTC  
CTGTGGGGCTCACCCAAAGTATTAAAGTAGCTTTGTAAAAA



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**FIGURE 4177**

MTGFLPPASRGTRRSCSRKRQTRRRRNPSSEFVASCPTLLPFACVPGASPTTLAFPPVVLTPSTDGIPFALS  
LQRVPFVLPSPQVASLPLGHSRG

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**FIGURE 4178**

GGCACGAGCCGAGATGCTCTCGCTCCGTGGCCTTAGCTGTGCTCGCGCTACTCTCTCTTTCTGGCCTGGAGGCTAT  
CCAGCGTACTCCAAAGATTCAGGTTTACTCACGTCATCCAGCAGAGAATGGAAAGTCAAATTTCTGAATTGCTA  
TGTGTCTGGGTTTCATCCATCCGACATTGAAGTTGACTTACTGAAGAATGGAGAGAGAATTGAAAAAGTGGAGCA  
TTCAGACTTGTCTTTCAGCAAGGACTGGTCTTTCTATCTCTTGTACTACACTGAATTCACCCCCACTGAAAAAGA  
TGAGTATGCCGTGCCGTGTGAACCATGTGACTTTGTCCAGCCCAAGATAGTTAAGTGGGATCGAGACATGTAAGC  
AGCATCATGGAGGTTTGAAGATGCCGCATTTGGATTGGATGAATTCCAAATTCGTCTTGCTTGCTTTTTAATATT  
GATATGCTTATACACTTACACTTTATGCACAAAATGTAGGGTTATAATAATGTTAACATGGACATGATCTTCTTT  
ATAATTCTACTTTGAGTGTCTCTCCATGTTTGATGTATCTGAGCAGGTTGCTCCACAGGTAGCTCTAGGAGGGC  
TGGCAACTTAGAGGTGGGGAGCAGAGAATTCTCTTATCCAACATCAACATCTTGGTCAGATTGAACTCTTCAAT  
CTCTTGCACTCAAAGCTTGTTAAGATAGTTAAGCGTGCATAAGTTAACTTCCAATTTACATACTCTGCTTAGAAT  
TTGGGGGAAAATTTAGAAATATAATTGACAGGATTATTGGAAATTTGTTATAATGAATGAAACATTTTGTTCATAT  
AAGATTATATTTACTTCTTATACATTTGATAAAGTAAGGCATGGTTGTGGTTAATCTGGTTTATTTTGTTCAT  
CAAGTTAAATAAATCATAAACTTG

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**FIGURE 4179**

MSRSVALAVLALLSLSGLEAIQRTPKIQVYSRHPAENGKSNFLNCYVSGFHPSDIEVDLLKNGERIEKVEHSDLS  
FSKDWSFYLLYYTEFTPTEKDEYACRVNHVTLSPKIVKWDRDM

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**FIGURE 4180**

GTATATATGTGATTCAGATATGTATTTCTGACTTGAAGTGAAATATGCTGGAAAACCTCACACAACCTATGGGAGAA  
CTATCCTATCCCTGAACCAGGCCCAAATGAGGTCTTGCTGAGGATGCATTCTGTTGGAATCTGTGGCTCAGATGT  
CCACTACTGGGAGTATGGTCGAATTGGGAATTTTATTGTGAAAAAGCCCATGGTGCTGGGACATGAAGCTTCGGG  
AACAGTCGAAAAAGTGGGATCATCGGCAAAGCACCTAAAACCAGGTGATCGTGTTGCCATCGAATCTGGTGCTCC  
CCGAGAAAATGATGAATTCTGCAAGATGGGCCGATACAATCTGTCACCTTCCATCTTCTTCTGTGCCACACCCCC  
CGATGATGGGAACCTCTGCCGGTTCTATAAGCACAAATGCAGCCTTTTGTTACAAGCTTCCTGACAATGTCACCTT  
TGAGGAAGGCGCCCTGATTGATCCACTTTCTGTGGGGATCCATGCCTGCAGGAGAGGCGGAGTTACCCTGGGACA  
CAAGGTCCTTGTGTGTGGAGCTGGGGCAATCGGGGTAGTCACCTTTGCTCGTGGCCAAGGCAATGGGAGCAGCTCA  
AGTAGTGGTGACTGATCTGTCTGCTACCCGATTGTCCAAAGCCAAGGAGATTGGGGCTGATTTAGTCCTCCAGAT  
CTCCAAGGAGAGCCCTCAGGAAATCGCCAGGAAAGTAGAAGGTCTGCTGGGGTGCAAGCCGGAAGTCACCATCGA  
GTGCACGGGGCAGAGGCCTCCATCCAGGCAGGCATCTACGCCACTCGCTCTGGTGGGAACCTCGTGCTTGTGGGG  
CTGGGCTCTGAGATGACACCACCGTACCCCT

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**FIGURE 4181**

MHSVIGICGSDVHYWEYGRIGNFIVKKPMVLGHEASGTVEKVGSSAKHLKPGDRVAIESGAPRENDEFCKMGRYNL  
SPSIFFCATPPDDGNLCRFYKHNA AFCYKLPDNTFEEGALIDPLSVGIHACRRGGVTLGHKVLVCGAGAIGVVT  
LLVAKAMGAAQVVVTDLSATRLSKAKEIGADLVLQISKESPQEIARKVEGLLGCKPEVTIECTGQRPPSRQASTP  
LALVGTSC LWG WALR

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**FIGURE 4182**

CGCACGGCCGCGCAGATCTGTCTTGCTGGAAGCTTTTTCCTAGAGGTTGAGCGGTTTGACACAATGTCGGAAATGG  
CTGAGTTGTCCGAGCTGTATGAAGAGAGCAGTGACCTGCAGATGGATGTGATGCCTGGCGAGGGTGACCTTCCGC  
AGATGGAGGTAGGCAGCGGGAGCCGGGAGCTATCCCTGCGTCCCTCCCGCAGCGGGGCCAACAGCTCGAGGAGG  
AAGGCCCAATGGAGGAGGAGGAGGCCAGCCAATGGCGGCGCCAGAGGGGAAACGGAGCCTTGCTAACGGGCCCA  
ACGCTGGGGAGCAGCCAGGCCAGGTGGCGGGCGCAGACTTCGAGAGCGAGGACGAGGGCGAGGAATTTGATGACT  
GGGAGGACGACTACGACTATCCCGAAGAGGAGCAGCTCAGTGGTGCCGGCTACAGAGTATCAGCCGCTCTTGAAG  
AAGCCGACAAGATGTTTCTGAGAACAAGAGAACCAGCCCTGGATGGCGGGTTTCAGATGCATTATGAGAAGACCC  
CGTTTGATCAGTTAGCTTTTATCGAAGAGCTTTTTTCACTGATGGTTGTCAATCGTCTGACCGAAGAAGCTCGGCT  
GTGATGAGATTATTGATAGAGAGTACTTAGATGCTGTTAAAAGAGGAGGAACTACTTGAGGAGGGACCCAACTT  
TCCGCTATCTTTTGGGTTTCATTCCAAATAGTTTTGTGCCATTGAAAACTTGACCTTCAAAAAATTTGTTTTTC  
AGAATAGAACACAATAGGACAGTGACTGCACAGTTGTGAAAAAGGAAGAGAATCATTAAAGAAAAAGAAAAAGA  
TTTTAAGACCGTTGAAATCAATTATCAAGAACGTCCTAAAACACCTATGGCTTTGACTTTGTTATTGATCCAGAT  
TATTTTCCTTGCAATTGGGGAAAAATATCTTTCATATTTGTTTGCTGTAAAGATGGTTTTGCAAGAATAAGTCATGA  
CCAAGACAACTGCCAATACAAAAGCCCACTGATACTAATTATATAATGAGAAAAAATGTATCCAAC TAGGACA  
CATATCTTTTGAGTTATTTGGACTGAAAGCTTAAGAAAAGCTTGAAAAATCTATTTTGTGATCTAGTCAAGCCAC  
AGTTATCAAAGGCTACATTTTCAGTGTAAGATAAATGGATGAGTAACTCAAATATGFATCACGTGTGCTTTGTA  
TCTTAAGATGTGTTTCCAAGAGCATCTGAAATTTGTTTGATACATGTATCTTGATCATTATAAAGCCACTGTGA  
TCTATAAATCAAGAAAATCCATTGTCATAACCATTTTAAAAGTCAAAAATTAAGACATCCTTAATTA AAAAGTT  
TCAAATCTAGACACTAAATGTGTGTGAATGTACAAAGAAAACAAACCATTGCTTATGCTGTTATATACTAGAGAA  
ATTTTGTTTTGCTTGCTGTTTTAACTTGACAGATGAAGGACTTTAGTTGAACTTCATATTGTAAGAAGCTTAAT  
AAAAGTTGTCAAGTAAAAAGCGCTATATCTAAAAAGACTTTATGAACAGTTATTCTATCAACTTTTAAAGGTTTT  
AAACCTGCCCAGAAATTACCTTGGTATCTGAAGTTCCCTCTGTCTCCTCCTCTAATTAAGCTTGTTATTTGTCA  
TGCACCAGCATTGGAGATAATAAAATTTCTTGTTCTGTGTAAAAA AAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4183**

MSEMAELSELYEESDLQMDVMPGEGDLPQMEVGSGSRELSLRPSRSGAQQLEEEGPMEEEEAQPMAPPEGKRSL  
ANGPNAGEQPGQVAGADFESEDEGEFEFDDWEDDYDYPEEEQLSGAGYRVSAALEEADKMFLRTREPALDGGFQMH  
YEKTPFDQLAFIEELFSLMVVNRLTEELGCDEIIDRE

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**FIGURE 4184A**

GAGCCCCGGCCCCGGGGGACGGGCGGCGGGATAGCGGGACCCCGGCGGCGGGTGCCTTCAGGGCGCAGCGGCGGC  
CGCAGACCGAGCCCCGGGCGCGGCAAGAGGCGGCGGGAGCCGGTGGCGGCTCGGCATCATCGCTCGAGGGCGTCT  
GCTGGAGATCGCCCTGGGATTTACCGTGCTTTTAGCGTCTACACGAGCCATGGGGCGGACGCCAATTTGGAGGC  
TGGGAACGTGAAGGAAACCAGAGCCAGTCGGGCCAAGAGAAGAGGCGGTGGAGGACACGACGCGCTTAAAGGACC  
CAATGTCTGTGGATCACGTTATAATGCTTACTGTTGCCCTGGATGGAAAACCTTACCTGGCGGAAATCAGTGTAT  
TGTCGCCATTTGCCGGCATTCCTGTGGGGATGGATTTTGTTCGAGGCCAAATATGTGCACTTGCCCATCTGGTCA  
GATAGCTCCTTCCTGTGGCTCCAGATCCATAACAACACTGCAATATTGCTGTATGAATGGAGGTAGCTGCAGTGA  
CGATCACTGTCTATGCCAGAAAGGATACATAGGGACTCACTGTGGACAACCTGTTTGTGAAAGTGGCTGTCTCAA  
TGGAGGAAGGTGTGTGGCCCCAAATCGATGTGCATGCACCTACGGATTTACTGGACCCAGTGTGAAAGAGATTA  
CAGGACAGGCCCCATGTTTTACTGTGATCAGCAACCAGATGTGCCAGGGACAACCTCAGCGGGATTGTCTGCACAAA  
AACGCTCTGCTGTGCCACAGTCGGCCGAGCCTGGGGCCACCCCTGTGAGATGTGTCCTGCCACGCTCACCCCTG  
CCGCGTGGCTTCATTCCAAATATCCGCACGGGAGCTTGTCAAGATGTGGATGAATGCCAGGCCATCCCCGGGCT  
CTGTGAGGGAGGAAATTGCATTAATACTGTTGGGTCTTTTGTGAGTGCAAATGCCCTGTGGACACAACTTAATGA  
AGTGTACAAAAATGTGAAGATATTGATGAATGCAGCACCATTCTGGAATCTGTGAAGGGGGTGAATGTACAAA  
CACAGTCAGCAGTTACTTTTGCAAATGTCCCCCTGGTTTTTACACCTCTCCAGATGGTACCAGATGCATAGATGT  
TCGCCCAGGATACTGTTACACAGCTCTGACAAACGGGCGCTGCTCTAACAGCTGCCACAGTCCATAACCAAAT  
GCAGTGCTGCTGTGATGCCGGCCGATGCTGGTCTCCAGGGTCACTGTGCCCCCTGAGATGTGTCCTCATCAGAGC  
AACCGAGGATTTCAACAAGCTGTGCTCTGTTCTTATGGTAATTCCTGGGAGACCAGAATATCTCCCCCACCCT  
TGGCCCCATTCTCCAGTTCTCCCTGTTCTCTGGCTTCTCTGACCTCAAATTCGGTCCCTCGACCACC  
AGTGAATATCTGTATCCATCTCGGGAGCCACCAAGGTGCTGCCAGTAAACGTTACTGATTACTGCCAGTTGGT  
CCGCTATCTCTGTCAAAATGGACGCTGCATTCCAACCTCTGGGAGTTGCCGTGTGAGTGAACAAAGGGTTCCA  
GCTGGACCTCCGTGGGGAGTGTATTGATGTTGATGAATGTGAGAAAAACCCCTGTGCTGGTGGTGAAGTGTATTAA  
CAACCAGGGTTCTGACACCTGTCACTGCCGAGCTGGATATCAGAGCAGCTCAGCGGACAGAATGCCGAGACAT  
TGATGAGTGTTTACAGAATGGCCGGATCTGCAATAATGGACGCTGCATCAACACAGATGGCAGTTTTCATTGCGT  
GTGTAATGCGGGCTTTTCATGTTACACGAGATGGGAAGAACTGTGAAGATATGGATGAATGCAGCATGAAGAACAT  
GTGCTTAATGGAATGTGTATCAATGAAGATGGCAGTTTTAAATGTATTTGCAAACCTGGATTCCAGCTGGCATC  
AGATGGACGTTATTGCAAAGACATTAACGAGTGTGAACCCCTGGGATCTGCATGAATGGGCGTTGCGTCAACAC  
TGATGGCTCCTACAGATGTGAATGCTTCCCTGGATGGCTGTGGGTCTGGATGGCCGTGTGTGTTGACACACA  
CATGCGGAGCACATGCTATGGTGGATACAAGAGAGGCGAGTGTATCAAACCTTGTGTTGGTGTCTACTAAATC  
TGAATGCTGTTGCGCCAGCACTGAGTATGCATTTGGGGAACCTTGCCAGCCGTGTCCTGCACAGAATTCAGCGGA  
ATATCAGGCACTCTGCAGCAGTGGGCCAGGAATGACGTCAAGGAGTGTATATAAATGAATGTGCACTAGATCC  
TGATATTTGCCCAAATGGAATCTGTGAAAACCTTCGTGGGACCTATAAATGTATATGCAATTCAGGATATGAAGT  
GGATTCAACTGGGAAAACTGCGTTGATATTAATGAATGTGTACTGAACAGTCTCCTTTGTGACAATGGACAATG  
TAGAAATACTCCTGGAAGTTTTGTCTGTACCTGCCCAAGGGATTTATCTACAAACCTGATCTAAAAACATGTGA  
AGACATTGATGAATGCGAATCAAGTCCTTGCAATTAATGGAGTCTGCAAGAACAGCCAGGCTCTTTTATTTGTGA  
ATGTTCTTCTGAAAGTACTTTGGATCCAACAAAAACCATCTGCATAGAAACCATCAAGGGCACTTGCTGGCAGAC  
TGTCATTGATGGGCGATGTGAGATCAACATCAATGGAGCCACCTTAAAGTCCCAGTGCTGCTCCTCCCTCGGTGC  
TGCGTGGGGAAGCCCGTGCACCCTATGCCAAGTTGATCCCATATGTGGTAAAGGGTACTCAAGAAATTAAGGAAC  
ACAAATGTGAAGATATAGATGAATGTGAAGTGTTCAGGAGTGTGTAAAAATGGCCTGTGTGTTAACTAGGGG  
GTCATTCAAGTGTCACTGTCCAGTGGAAATGACTTTGGATGCCACAGGAAGGATCTGTCTTGATATCCGCTGGA  
AACCTGCTTCCAGGTTACGAGGACGAGGAGTGCACCCTGCCTATTGCTGGCCGCCACCGCATGGACGCTGCTG  
CTGCTCCGTGCGGGCAGCCTGGGGTACTGAGGAATGCGAGGAGTGTCCCATGAGAAATACTCCTGAGTACGAGGA  
GCTGTGTCCGAGAGGACCCGGATTTGCCACAAAAGAAATTACAAATGGAAAGCCTTTCTTCAAAGATATCAATGA  
GTGCAAGATGATACCCAGCCTCTGCACCCACGGCAAGTGCAGAAACACCATTTGGCAGCTTTAAGTGCAGGTGTGA  
CAGCGGCTTTGCTCTTGATTCTGAAGAAAGGAAGTGCACAGACATTGACGAATGCCGATATCTCCTGACCTCTG  
TGGCAGAGGCCAGTGTGTGAACACCCCTGGGGACTTTGAATGCAAGTGTGACGAAGGCTATGAAAGTGGATTCT  
GATGATGAAGAACTGCATGGATATTGATGAGTGTGAGAGATCCTCTCCTATGCCGAGGTGGTGTGTTGCCATAA  
CACAGAGGGAAGTTACCGCTGTGAATGCCGCGCTGGCCATCAGCTGTCCCCAACATCTCCGCGTGTATCGACAT



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**FIGURE 4184B**

CAATGAATGTGAGCTGAGTGCACACCTGTGCCCAATGGCCGTTGCGTGAACCTCATAGGGAAGTATCAGTGTGC  
CTGCAACCCCTGGCTACCAATTCAACTCCCGATAGGCTATTTTGTGTTGACATTGATGAATGCAGCATAATGAATGG  
TGGTTGTGAAACCTTCTGCACAACTCTGAAGGCAGCTATGAATGTAGCTGTCAGCCGGGATTGCACTAATGCC  
TGACCAGAGATCATGCACCGACATCGATGAGTGTGAAGATAATCCCAATATCTGTGATGGTGGTCAGTGCACAAA  
TATCCCTGGAGAGTACAGGTGCTTGTGTTATGATGGATTTCATGGCATCTGAAGACATGAAGACTTGTGTAGATGT  
CAATGAGTGTGACCTGAATCCAAATATCTGCCTAAGTGGGACCTGTGAAAACACGAAAGGCTCATTTATCTGCCA  
CTGTGATATGGGCTACTCCGGCAAAAAGGAAAACTGGCTGTACAGACATCAATGAATGTGAAATGGAGCACA  
CAACTGTGGCAAACATGCTGTATGTACCAATACAGCAGGAAGCTTCAAATGTAGCTGCAGTCCCGGGTGGATTGG  
AGATGGCATTAAAGTGCACCTGATCTGGACGAATGTTCCAATGGAACCCATATGTGCAGCCAGCATGCAGACTGCAA  
GAATACCATGGGATCTTACCGCTGTCTGTGCAAGGAAGGATACACAGGTGATGGCTTCACCTGTACAGACCTTGA  
TGAGTGTCTGAGAACCTGAATCTCTGTGGCAATGGCCAGTGCCTCAATGCACCAGGAGGATACCGCTGTGAATG  
CGACATGGGCTTCGTGCCAGTGTGACGGGAAAGCCTGTGAAGATAATTGATGAGTGTGCTCCCTTCCGAACATCTG  
TGTCTTTGGAACCTTGCCACAACCTCCCTGGCCTGTTCCGCTGTGAGTGTGAGATAGGCTACGAACCTGGACAGAAG  
CGCGGGGAACCTGCACAGATGTGAATGAATGCCTGGATCCAACCAGTGCATCAGTGGGAACCTGTGTCAACACTCC  
AGGCAGCTATATCTGTGACTGCCACCTGATTTTGAACCTGAACCAACTCGAGTTGGCTGTGTTGATACCCGCTC  
TGGAAATTGCTATTTGGATATTCGACCTCGAGGAGACAATGGAGATACAGCCTGCAGCAATGAAATTGGAGTTGG  
TGTTTCCAAAGCTTCCTGCTGCTGTCTCTGGGTAAAGCCTGGGGTACTCCTTGTGAGATGTGTCTGCTGTGAA  
CACATCCGAGTACAAAATTCCTTGTCTGGAGGGGAAGGTTTCCGACCAAAATCCTATCACCGTTATATTGGAAGA  
TATTGATGAGTGCAGGAGCTACCAGGGCTGTGCCAAGGAGGAAATGTATCAACACCTTTGGGAGTTTCCAGTG  
CCGCTGTCCAACCGGCTACTACCTGAATGAAGATACAGAGTGTGTGATGATGTGAATGAATGTGAGACTCCTGG  
AATCTGTGGTCCAGGGACATGTTACAACACCGTTGGCAACTACACCTGTATCTGTCTCCAGACTACATGCAAGT  
GAATGGGGGAAATAATTGCATGGATATGAGAAGAAGTTTGTGCTACAGAACTACTATGCTGACAACAGACCTG  
TGATGGAGAATTGTTATTCAACATGACCAAGAAGATGTGCTGCTGTTCTTACAACATTGGCCGGGCGTGGAAACA  
GCCCTGTGAACAGTGTCCCATCCCAAGTACAGATGAGTTTGTCTACTCTGTGGAAGTCAAAGGCCAGGCTTTGT  
CATCGACATTTATACCGGTTTACCCGTTGATATTGATGAGTGGCGGAGATCCCAGGGGTCTGTGAAATGGAGT  
GTGTATCAACATGGTTGGCAGCTTCCGATGTGAATGTCCAGTGGGATTCTTCTATAATGACAAGTTGTTGGTTTG  
TGAAGATATTGACGAGTGTGACAACGGCCAGTGTGCGACGCAACGCCGAATGCATCAACACTGCAGGCAGCTA  
CCGCTGTGACTGTAAAGCCCGGCTACCGCTTCCACCTCCACAGGACAGTGCATGATGATGATGAATGTCAAGAAAT  
CCCCAATATATGCAGTCAATGGGCAGTGCATTGACACAGTTGGAAGCTTTTATTGCCCTTGGCCACACTGGTTTTAA  
AACAAATGATGACCAACCATGTGCTTGGACATAAATGAATGTGAAAGAGATGCCTGTGGGAATGGAACCTGGCCG  
GAACACAATTGGTTCCCTCAACTGCCGCTGCAATCATGTTTTCATCCTTTCTCACAACATGACTGTATAGATGT  
TGATGAATGTGCAAGTGGAATGGGAATCTTTGCAGAAATGGCCAATGCATTAATACAGTGGGGTCTTTCCAGTG  
CCAGTGCATGAAGGCTATGAGGTGGCTCCAGATGGGAGGACCTGTGTGGATATCAATGAATGTCTTCTAGAACC  
CAGAAAATGTGCACCAGGTACCTGTCAAACCTTGGATGGGTCTACAGATGCATTTGCCACCTGGATACAGTCT  
TCAAAATGAGAAGTGTGAAGATATTGATGAGTGTGTGCAAGAGCCAGAAATTTGTGCCCTGGGCACATGCAGTAA  
CACTGAAGGCAGCTTCAAATGTCTGTGTCCAGAAGGGTTTTCTTGTCTCCAGTGGGAAGAAGGTGCCAAGATTT  
GCGAATGAGCTACTGTTATGCGAAGTTTGAAGGAGGAAAGTGTTCATCACCCAAATCCAGAAATCACTCCAAGCA  
GGAATGCTGCTGTGCCCTTGAAGGGAGAAGGCTGGGGAGACCCCTGCGAGCTCTGCCCCACGGAACCTGATGAGGC  
CTTCCGCCAGATATGTCTTATGGAAGTGGGATCATCGTGGGACCTGATGATTCAGCAGTTGATATGGACGAATG  
CAAAGAACCCGATGTCTGTAAACATGGACAGTGCATCAATACAGATGGTTTCTATCGCTGCGAGTGTCCCTTTGG  
TTATATTCTAGCAGGGAATGAATGTGTAGATACTGATGAATGTTCTGTTGGCAATCCTTGTGGAAATGGAACCTG  
CAAGAATGTGATTGGAGGTTTTGAATGCACCTGCGAGGAGGGATTGAGCCCGTCCAATGATGACATGTGAAGA  
TATAAATGAATGTGCCAGAATCCTCTGCTGTGCTTCCGATGTGTGAACACTTATGGGTCTATGAATGCAA  
ATGTCCCGTGGGATATGTGCTCAGAGAAGACCGTAGGATGTGCAAAGATGAGGATGAGTGTGAAGAGGGAAAAACA  
TGACTGTACTGAAAAACAAATGGAATGCAAGAACCTCATTGGCACATATATGTGCATCTGTGGACCCGGGTATCA  
GCGGAGACCTGATGGAGAAGGCTGTGTAGATGAGAATGAATGTCAGACGAAGCCAGGGATCTGTGAGAATGGGCG  
CTGCCCTCAACACCCGTGGGAGCTACACCTGTGAGTGTGAATGATGGGTTTACCGCCAGCCCCAACAGGACGAGTG  
CCTTGACAATCGGGAAGGGTACTGCTTACAGAGGTGCTACAAAACATGTGTGATCGGCTCCAGCAACAGGAA

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**FIGURE 4184C**

CCCCGTCACCAAATCGGAATGCTGCTGTGACGGAGGGAGAGGCTGGGGTCCCCACTGTGAGATCTGCCCTTTCCA  
GGGGA CTGTGGCTTTCAAGAACTCTGTCCCCATGGCCGAGGATTCATGACCAATGGAGCAGATATCGATGAATG  
CAAGGTTATTACGATGTTTGCCGAAATGGGGAATGTGTCAATGACAGAGGATCATATCATTGCAATTGTAAAC  
TGGGTACACTCCAGATATAACTGGGACTTCCTGTGTAGATCTGAACGAGTGCAACCAGGCTCCCAAAACCTGCAA  
TTTTATCTGCAAAAACACAGAAGGGAGTTACCAGTGTTTCATGCCCCGAAAGGCTACATTCTGCAAGAGGATGGAAG  
GAGCTGCAAAAGATCTTGATGAGTGTGCAACCAAGCAACACAACCTGCCAGTTCCTATGTGTTAACACCATTTGGCGG  
CTTCACATGCAAAATGTCTCCCGGATTTACCCAACACCATACGTCCTGCATTGATAACAATGAATGCACCTCTGA  
CATCAATCTGTGCGGGTCTAAGGGCATTTGCCAGAACACTCCTGGAAGCTTCACCTGTGAATGCCAGCGGGGATT  
CTCACTTGATCAGACCGGCTCCAGCTGTGAAGACGTGGACGAGTGTGAGGGTAACCACCGCTGCCAGCATGGCTG  
CCAGAACATCATTGGGGGCTACAGGTGCAGCTGCCCCCAGGGCTACCTCCAGCACTACCAAGTGAACCAAGTGTGT  
TGATGAAAACGAATGCCTCAGCGCTCACATCTGCGGAGGAGCCTCCTGTCAACACACCTGGGGAGCTACAAGTG  
CATGTGTCCCGCCGGCTTCCAGTATGAACAGTTTCAGTGGAGGATGCCAAGACATCAATGAATGTGGCTCTGCGCA  
GGCCCCCTGCAGCTATGGCTGTTCCAATACCGAGGGCGGTTACCTGTGTGGCTGTCCACCTGGTTACTTCCGCAT  
AGGCCAAGGGCACTGTGTTTCTGGAATGGGCATGGGCGGAGGAAACCCAGAGCCACCTGTGAGTGGTGAATGGA  
TGACAATTCACTCTCCCCAGAGGCTTGTTACGAGTGTAAAGTCAATGGCTACCCCAAACGGGGCAGGAAACGGAG  
AAGCACAAACGAAACTGATGCCTCCAATATCGAGGATCAGTCTGAGACAGAAGCCAATGTGAGTCTTGAAGTTG  
GGATGTTGAGAAGACAGCCATCTTTGCTTTCAATATTTCCACGTCAGTAACAAGGTTGCAATCCTAGAACTCCT  
TCCAGCTCTTACAACCTGACGAATCACAACAGATACTTGATCGAATCTGGAATGAAGATGGCTTCTTTAAAT  
CAACCAAAAGGAAGGGATCAGCTACCTCCACTTCACAAAGAAGGCCAGTGGCTGGAACCTATTTCATTACAAAT  
CAGTAGTACTCCACTTTATAAAAAGAAAGAACTTAACCAACTAGAAGACAAATATGACAAAGACTACCTCAGTGG  
TGAAGTGGGTGATAATCTGAAGATGAAAATCCAGGTTTTGCTTCATTAATTCACCATCCAGAGACCAATAATTA  
AAAGAAAAACAAATATAGATAGGTAGAACTATATTTTCCCCAATCAGAATCATCATATCATAGGTACAATCTTT  
CACCAAGTAAATTTGTATAAATAAGCACTATTCTTTGTATTACCAAAGCAAGGTACAGGTGACTACCTAGTTCA  
AAACAACCACTTTCTCAGGCTTCTCATGTGTGTAGCTAAGCTACCTTGTCTATATGTGTGATTCTTGAAAACCTGG  
GACGTGATTTCCATTGGGGGTGGCCATTTATGCTGACATGCCATCCTTCCAGCAAACGTACGGGAATGTGCTT  
TCAATTGATGGACTACTCTATTTTTTGCAAATTTGTAACTTTGCTTCTCCAAATACAAGTACTAGGTGTCCAT  
TTATGGTACCTATTTGGTGCTAGTAAATTTTCAAACCTAGATTTATAAATGCACTGTAATATGTACACAACCTTAGA  
AACCAAATTACAAGTATTCAGTTCCAATACTTCATTAATTTCAATCAACCAAGTTAGTTTCAGTAGCTTATCTCA  
GTTATGAGTATAATACATTACATGTAAATTAAGTGTGTGTATACTGTAATCGTGCTATTTTTTATCATTGAAACA  
TTTATAAACTAGAATAAATAATGCCCTTAATGTGAGGGTTTGTAAATGGTGCTTATTAAGACCAAGACTTGTTAA  
TGTATACACCAAGTGGTAATGAAATTTCCGGTGACTGGCCACACGTCATAGAGGTCTGGGAGGACCAGGAAACA  
GCCTCAGTGGCCAGAGGATCACCAGTGCATCCTTCATCACAGCATGTGCAATATGCCAAGATTACCTCGGTCAT  
TCCTGTCAACAAGGGGTCAATGTCTATAAATGTCACAATAAAACAATCTCTCTTTTTTTTAGTTT

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**FIGURE 4185**

MRRGRLLLEIALGFTVLLASYTSHGADANLEAGNVKETRASRAKRRGGGGHDALKGPNVCGSRYNAYCCPGWKTLF  
GGNQCIVIPICRHSCGDGFCSRPNMCTCPSGQIAPSCGSRSIQHCNIRCMNGGSCSDDHCLCQKGYIGTHCGQPVC  
ESGCLNGGRCAVPNRCACCTYGTGPQCERDYRTGPCFTVISNQMCQGQLSGIVCTKTLCCATVGRAWHPCCEMCP  
AQPHPCRGRFIPNIRTGACQDQVDECQAIPGLCQGGNCINTVGSFECKCPAGHKLNEVSQKCEDIDECSTIPGICE  
GGECTNTVSSYFCKCPPGFYTSPDGTTRCIDVRPGYCYALTNGRCSNQLPQSITKMQCCDAGRCWSPGVTVAPE  
MCPIRATEDFNKLCSVPMVIPGRPEYPPPLGP IPPVLVPVPPGFPGPQIPVPRPPVEYLYPSREPPRVLPVNV  
DYCQLVRYLCQNGRCIPTPGSCRCECNKGFLDLRGECDVDECEKNPCAGGECINNQGSYTCQCRAGYQSTLTR  
TECRDIDECLQNGRICNNGRCINTDGSFHCVCNAGFHVTRDGNKCEDMDECSIRNMCLNGMCINEDGSFKCICKP  
GFQLASDGRYCKDINECETPGICMNGRCVNTDGSYRCECFPLAVGLDGRVCVDTHMRSTCYGGYKRGQCIKPLF  
GAVTKSECCCASTEYAFGEPCQPCPAQNSAEYQALCSSGPGMTSAGSDINECALDPDIPNGICENLRGTYKCI  
NSGYEVDSTGKNCVDINECVLNSLLCDNGQCRNTPGSFVCTCPKGFYKPDLTCEIDECESPPCINGVCKNSP  
GSFICECSSESTLDPKTIETIKGTWQTVIDGRCEININGATLKSQCCSSLGAANGSPCTLCQVDPICGKGY  
SRIKGTQCEDIDECVFPVGVCKNGLCVNTRGSFKCQCPSGMTLDATGRICLDIRLETCLFRYEDEECTLP IAGR  
RMDACCCSVGAANGTEECCECPMRNTPYEELCPRGPGFATKEITNGKPFKIDINECKMIPSLCTHKGCRNTIGS  
FKCRCDSGFALDSEERNCTDIDECRISPDLCGRGQCVNTPGDFECKCDEGYESGFMNMKNMCDIDECQRPDLR  
GGVCHNTEGSRCECPPGHQLSPNISACIDINECELSAHLCPNGRCVNLIGKYQCACNPGYHSTPDRFLCVDIDE  
CSIMNGGCETFTNSEGSYECSCQPGFALMPDQRSDTIDECEDNPNICDGGQCTNIPGEYRCLCYDGFMA SEDM  
KTCVDVNECDLNPNICLSGTCENTKGSFICHCDMGYSKKGKTGCTDINECEIGAHCNGKHAHVCTNTAGSFKCS  
SPGWIGDGIKCTDLDECSNGTHMCSQHADCKNTMGSYRCLCKEGYTG DGFTCTDLDECSNENLNLGNGQCLNAP  
GYRCECDMGFVPSADGKACEDIDECSLPNICVFGTCHNLPGLFRCECEIGYELDRSGGNCTDVNECLDPTTCISG  
NCVNTPGSYICDPPDFELNPTRVGCVDTIRSGNCYLDIRPRDNGDTACSNEIGVGVSKASCCCSLGKAWGTPCE  
MCPAVNTSEYKILCPGGEGFRNPITVILEDIDECQELPGLCQGGKCINTFGSFQCRCTGYLYNEDTRVCDVN  
ECETPGICGPGTCYNTVGNITCIPPDYMQVNGGNMCMRRSLCYRNYADNQTCDEGELLFNMTKKMCCCSYNI  
GRAWNKPCQCPIPSTDEFATLCGSQRPFGVIDIYTGLPVDIDECREIPGVCENGVCINMVGSFRCECPVGFFYN  
DKLLVCEDIDECQNGPVCQRNAECINTAGSYRCDCKPGYRFTSTGQCNDRNECQEI PNICSHGQCIDTVGSFYCL  
CHTGFKTNDQTMCLDINECERDAGNGTCRNTIGSFNCRCNHGFILSHNND CIDVDECASGNLNLGRNGQCINT  
VGSFQCQCNEGYEVAPDGRITVDINECLLEPRKCAPGTCQNL DGSYRCICPPGYSLQNEKCEDIDECVEEPEICA  
LGTCSNTEGSFKCLCPEGFLSSSSGRRCQDLRMSYCYAKFEGGKCSSPKSRNHKQECCKALKGEGWGPCELCP  
TEPDEAFRQICPYGSGIIVGPDDSAVDMDECKEPDVCKHGQCINTDGSYRCECPFGYILAGNECVDTDECSVGNP  
CGNGTCKNVIGGFECTCEEGFEPGPMTCEDINECAQNPLLCAFRCVNTYGSYECKCPVGYVLREDRRMCKDEDE  
CEEKGHDCTEKQMECKNLIGTYMCICGPGYQRRPDGEGCVDENECQTKPGICENGRCLNTRGSYTCENDGFTAS  
PNQDECLDNREGYCFTEVLQNMCIQSSNRNPVTKECCCDGGRGWGPHEICPFQGTVAFFKLLCPHGRGFMING  
ADIDECKVIHDCVCRNGECVNDRGSYHCICKTGYTPDITGTSCVDLNECNQAPKPCNFICKNTEGSYQCSCKGYI  
LQEDGRSCKDLDECATKQHNCQFLCVNTIGGFTCKPPGFTQHHTSCIDNNECTSDINLCGSKGICQNTPGSFTC  
ECQRGFSLDQTGSSCEDVDECEGNHRCQHGCQNIIGGYRCSQPGYLQHYQWNQCVDENECLSAHC GGASCHNT  
LGSYKCMCPAGFYEQFSGGCQDINECGSAQAPCSYGCNTEGGYLCGCPPGYFRIGQGHCVSGMGMGRGNPEPP  
VSGEMDDNSLSPEACYECKINGYPKRGKRSTNETDASNIEDQSEANVSLASWDVEKTAIFAFNISHVSNKV  
RILELLPALTTLTNHNRYLIESGNEDGFFKINQKEGISYLFHTKKKPVAGTYSLQISSTPLYKKKELNQLDKYD  
KDYLSGELGDNLMKIQVLLH

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**FIGURE 4186**

AAGATGCTGAAAGGAAAGAAGGCCAAGGGAAAGAAGGTGGCTCCGGCCCTGCAGTCGTGAAGAAGCAGGAGGCT  
AAGAAAGTGGTGAATCCCGTTTGAGCAAAGGCCTAAGAATTTTGGCATTGGACAGGACATCCAGCCCAAAAGAGA  
CCTCACCCGCTTTGTGAAATGGCCCCACTATATCAGGCTGCTGGCAAAGGGGATGTCCCCACGAAGAGACCACCT  
GTCCTTCGAGCAGGAGTTGACACCGTCACCACCTTGGTGGACAATAAGAAAGCTCAGCTGGTGCTGATTGCACAC  
GACGTGGATCCCATCGAGCTGGTTGTCTTCTTGCCTGCCCTGTGTCGTAAAATGGGGGTCCCTTACTGCATTATC  
AAGGGGAAGGCAAGACTGGGACGTCTAGTCCACAGGAAGACCTGCACCACTGTGGCCTTCACACAGGTGAACCTCG  
GAAGACAAAGGCGCTTTGGCTAAGCTGGTGGAAAGCTATCAGGACCAATTACAACGACAGATACGATGAGATCCGC  
CGTCACTGGGGCGGCAACGTCCTGGATCCTAAGTCTGTGGCTCGCATCGCCAAGCTCGAAAAGGCAAAGGCTAAA  
GAACCTTGCCACTAAATGGGGTTAAATGTACACTGTTGAGTTTCTGTACATAAAATAATTAAAATAATATAAATT  
TTCCTTC

**FIGURE 4187**

[illegible]

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**FIGURE 4188**

MAAAAKPNNLSLVVHGPGDLRLNYPPIPEPGPNEVLLRMHSGICGSDVHYWEYGRIGNFIVKKPMVLGHEASGT  
VEKVGSSVKHLKPGDRVAIEPGAPRENDEFCKMGRYNLSPSIFFCATPPDDGNLCRFYKHNAAFICYKLPDNTFE  
EGALIEPLSVGIHACRRGGVTLGHKVLVCGAGPIGMVTLVAKAMGAAQVVTDLSATRLSKAKEIGADLVLQIS  
KESPQEIARKVEGQLGCKPEVTIECTGAEASIQAGIYATRSGGTLVLVGLGSEMTTVPLLHAAIREVDIKGVFRY  
CNTWPEVAISMLASKSVNVKPLVTHRFPLEKALEAFETFKKGLGLKIMLKCDPSDQNP

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**FIGURE 4189**

GGAGAACTATCCTATCCCTGAACCAGGCCCAAATGAGGTCTTGCTGAGGATGCATTCTGTTGGAATCTGTGGCTC  
AGATGTCCACTACTGGGAGTATGGTCGAATTGGGAATTTTATTGTGAAAAAGCCCATGGTGCTGGGACATGAAGC  
TTCGGGAACAGTCGAAAAAGTGGGATCATCGGTAAAGCACCTAAAACCAGGTGATCGTGTTGCCATCGAATCTGG  
TGCTCCCCGAGAAAATGATGAATTCTGCAAGATGGGCCGATACAATCTGTACCTTCCATCTTCTTCTGTGCCAC  
ACCCCTGATGATGGGAACCTCTGCCAGTTCTATAAGCACAATGCAGCCTTTTGTACAAGCTTCCTGACAATGT  
CACCTTTGAGGAAGGCGCCCTGATTGATCCACTTTCTGTGGGGATCCATGCCTGCAGGAGAGGCGGAGTTACCCT  
GGGACACAAGGTCCCTTGTGTGTGGAGCTGGGGCAATCGGGGTAGTCACTTTGCTCGTGGCCAAGGCAATGGGAGC  
AGCTCAAGTAGTGGTGACTGATCTGTCTGCTACCCGATTGTCCAAAGCCAAGGAGATTGGGGCTGATTTAGTCCT  
CCAGATCTCCAAGGAGAGCCCTCAGGAAATCGCCAGGAAAGTAGAAGGTCTGCTGGGGTGCAAGCCGGAAGTCAC  
CATCGAGTGCACGGGGCAGAGGCCCTCCATCCAGGCAGGCATCTACGCCACTCGCTCTGGTGGGACCCTCGTGCTT  
GTGGGGCTGGGCTCTGAGATGACACCCTTACCCCTACTGCATGCAGCCATCCGGGAGGTGGATATCAAGGGCGTG  
TTTCGATACTGCAACACGTGGCCAGTGGCGATTTCGATGCTTGGCTCCAAGTCTGTGAATGTAAAACCCCTCGTC  
ACCCATAGGTTTCCTCTGGAGAAAGCTCTGGAGGCCTTTGAAACATTTAAAAGGGATTGGGGTTGAAAATCATG  
CTCAAGTGTGACCCAGTGACCAGAATCCCTGATGTTAATGGGCTCTGCCCTCATCCCCAGTCTCGGGATCTCAG  
GGCACAATGGCTGGACATGGGTGGGCTCTGATGCAGAACTTTCTCTTTGAATGTAAAGATAACTAATACAATT  
CATTGTGAACAGAAGTCCTTACGCAGAGGAATTGGTGTGCCTTAAAGATACAATCTGGGATAGTTTGGGGGAAC  
TGTAGCCAGAATGCCCTGTTTCATGCTGAGCAAAGTTCAGCAAGTAGAGCAGAGTTTGGCAGGCAGGTGCCAGGAA  
CTCCCCTTCTCCTGGAGTGCCCTCATTGAGGAAGGAAATCTGGCCCTTGGGTTTCTGTTCCACTGCTACTGA  
CCCAGAGGGGAATGAGGGCTGAGTTATGAAAAGATAACTTCATGAAGACTTAACTGGCCCAGAAGCTGATTTCA  
TGAAATCTGCCACTCAGGGTCTGGGATGAAGGCTGTGAGCACTTCCAGTTTAGAACGCAATGTTTCTAGAGAC  
ATATTGGCTGTTTGTGTTTATGATGATAAAAGGAGAATAAGAAAAGGCATCACTTTCTGGATCCAGGATAATTTTA  
AACCAATCAAATGAAAAAACAACAAACAAAAAGGAAATGTCATGTGAGGTTAAACCAGTTTGCATTCCCCTA  
ATGTGGAAGAAAGTAAGAGGACTACTCAGCACTGTTTGAAGATTGCCTCTTCTACAGCTTCTGAGAATTGTGTTAT  
TTCATTGCCAAGTGAAGGACCCCTCCCCAACATGCCCCACCCACCCCTAAGTACGGTCCCTTGTACACAGGC  
AACCAGGAACTGCTACTTGTGGACCTCACCAGAGACCAGGAGGTTTGGTTAGCTCACAGGACTTCCCCACCC  
CAGAAGATTAGCATGCCATACTAGACTCATACTCAACTCAACTAGGCTCATACTCAATTGATGTTATTAGACAA  
TTCCATTTCTTCTGGTTATTATAAACAGAAAATCTTCTCTTCTCATTACAGTAAAGGCTCTTGGTATCTTT  
CTGTTGGAATGATTTCTATGAACTTGTCTTATTTTAATGGTGGGTTTTTTTTCTGGTAAGATTGGACCTAAATC  
GCATCATGCCAAGTTGTGACTTTGAGACTATTCAAGAATGAGGATATAGTAGCCATGACATAGCTTGAGCTA  
TAGCCTTTAATTCCTTACTTTGGCTATGGGTGGAGGTTGAGTTTGAAGAGTTCTGATTTCTTGTAACTGGGA  
AAGCCATGACCTTGTGCCGATTCTTTTCAGATTGCTTTGGGTAATAAATATTGGTGGTGGTATCTG

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**FIGURE 4190**

MHSVIGCGSDVHYWEYGRIGNFIVKKPMVLGHEASGTVEKVGSSVKHLKPGDRVAIESGAPRENDEFCKMGRYNL  
SPSIFFCATPPDDGNLCQFYKHNAFCYKLPDNVTFEERALIDPLSVGIHACRRGGVTLGHKVLVCGAGAIGVVT  
LLVAKAMGAAQVVTDLSATRLSKAKEIGADLVLQISKESPQEIARKVEGLLGCKPEVTIECTGQRPPSRQASTP  
LALVGPSCLWGVALR



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**FIGURE 4191**

ATGGGAAAGGGCTCCTTCAAGTATGCCTGGGTCTTGGATAAACTGAAAGCTGAGCGTGAACATGGTATCACCATT  
CATATCTCCTTGTGGAAATTTGAGACCAGCAGGTACTATGTGACTATCACTGATGTCCCAGGACACAGAGACTTC  
ATCAAAAATATGATTACAGGGACATCTCAGGCTGACTGTGCTGTCTGATAGTTGCTGCTGGTGTGCCCCTGCTT  
CTCCAGGATGTCTACAAAATTGATGGTATTGGTACTGTTCTATTGGCCAAGTGGAGACTGGTGTCTCAAACCT  
GGTATGGTGGTCATCTTTGCTCCAGTCAACATTACAACCTGAAGTAAAATCTGTCAAAAGGCACCATGAAGATTTG  
AGTGAAGCTCTTCCTGGGGACAATGTGGGCTTCAATGTCAAGAATGTGTCTGTCAAGGATCTTTGTCGTGGCAAC  
TTTGCTGGTGACAGCAAAAATGACCCACCAATGGAAGCAGCTGGCTTCACTGCTCAGATGATTATCCTGAACCGT  
CCAGGCCTAATCAGCCCTGGCTACGTCCCTGTACTGGATTGCCACATGGCTCACCTTGCATGCAAGTTTGCTGAG  
CTGAAGAAAAGATTGATCGCCATTCTGCTGGAAGATGGCCCTAAATTCTTGAAGTCTGGTGTGCTGCCATCGTT  
GACATGGTTCTGTAAAGCCCATGTGTGTTAAGAGCTTCTCAGACTATCCACCTCTGGATCGCTTTGCTGTTTCA  
GATATGAGACAGACAGTTGTGATGGGTGTGATCAAAGCAGTGGACAAGAAGGCTGCTGGAGCTGGCAAGGCTGTC  
CACACCCTCTACACTTTAGAGGCTTCCCTGAATGGGATGCCCGTGATGAAAACATCCACCAGGAAGAAAGTGGCC  
TTTGAAAAAGACGTACAATAA

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**FIGURE 4192**

MKGGSFKYAWVLDKLKAEREHGITIHLWKFETSRYVVTITDVPGHRDFIKNMITGTSQADCAVLIVAAGVGEF  
EAGISRMSTKLMVLVLFLLAKWRLVFSNLVWSSLLQSTLQLK

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**FIGURE 4193**

CTGGTCTAACAGACCCGCGAGAACGAAGGACGCTTGCCTTTTTCCGGTCGGGGAAGGGGAAGAAGGTAAC TTCC  
GGTGACGGGGTTGCATCACTTCCTCTCAAGCTTGGCGTTTGT TTGGTGGGGTTACACGCGGGTTCAACATGCGTA  
TCGAAAAGTGTTATTTCTGTTTCGGGGCCCATCTATCCTGGACACGGCATGATGTTTCGTCCGCAACGATTGCAAGG  
TGTT CAGATTTTGCAAATCTAAATGTCATAAAAACTTTAAAAAGAAGCGCAATCCTCGCAAAGTTAGGTGGACCA  
AAGCATTCCGGAAAGCAGCTGGTAAAGAGCTTACAGTGGATAATTCATT TGAATTTGAAAACGTAGAAATGAAC  
CTATCAAATACCAGCGAGAGCTATGGAATAAACTATTGATGCGATGAAGAGAGTTGAAGAAATCAAACAGAAGC  
GCCAAGCTAAATTTATAATGAACAGATTGAAGAAAAATAAGAGCTACAGAAAGTTCAGGATATCAAAGAAGTCA  
AGCAAAACATCCATCTTATCCGAGCCCCCTCTTGCAGGCAAAGGGAAACAGTTGGAAGAGAAAATGGTACAGCAGT  
TACAAGAGGATGTGGACATGGAAGATGCTCCTTAAAAATCTCTGTAACCATTTCTTTTATGTACATTTGAAAATG  
CCCTTTGGTACTTGGAACTGCTAAATTATTTTATTTTTTACATAAGGTCAC TTAAATGAAAAGCGATTAAAGA  
CATCTTTCCTGCATTGCCATCTACATAATATCAGATATTACGGATGTTAGATTGCATCTCAGTGTTAAATCTTTA  
CTGATAGATGTACTTAAGTAAATCATGAAAATTCTACTTGTA ACTATAGAAGTGAATTGTGGACGTAAAATGGTT  
GTGCTATTTGGATAATGGCACTAGGCAGCATTTGTATAGTAACTAATGGCAAAAATTCATGGCTAGTGATGTATA  
AAATAAAATATTCTTTGCAGTAAATATTCCCTTTGT TAAATGTTATAGAAGGGGGGATACAAAAGGAACTAACA  
ATTTGTATGGCAGTGCAGATATTTTATTTTAGTATTTCTGT TTTGGTTTATTTGCATCTTAGAAGAGCATAA  
TGACATTGTTTGATGAAGCCTAATTATGCTGGACTGTTT TACCTGGTTTAAACCCTTCTGATAGGTAGTTGTGGA  
TGCTGGGGATGAGAACTGAATAATCTTTCCTGGAGTGACACTACACTCTAGAATTTCCACTTTGGAGAATACTC  
AGTTCCAAC TTGTGATTCTGATAGAACAGACTTTACTTTTCTAGCCCAGCATTGATCTAGAAGCAGAGGAATCC  
CAGCGCCTTTTAAAAGTTGTTATGTGGTTTCTTTTAAAAAGCTCCTGTTT TGGAAAGTAGAATTTATGGGTAC  
AACGTATGTTTATTATTTGTACATAAAATAAAACCATT TAAAAAGTAAAAAAAAAAAAAAAAA

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**FIGURE 4194**

MRIEKCYFCSGPIYPGHGMMFVRNDCKVFRFCKSKCHKNEFKKRNPRKVRWTKAFRKAAGKELTVDNSFEFEKRR  
NEPIKYQRELWNKTIDAMKRVEEIKQKRQAKFIMNRLKKNKELQKVQDIKEVKQNIHLIRAPLAGKGKQLEEKMV  
QQLQEDVDMEDAP

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## FIGURE 4195

ACATAACTCCCCATGTCTGTTGATAAAAAAGAGACCCTAAGGAGGATTAACTGTTCTCATCCTTTCGTTAGGGA  
ACTGGGAATTGAAGCTGGAGTGACTGCAGCTACTTATACACCTGGTGCATTGCATCCTCACTTGGCCCCATTATCA  
CGCACCTCCTCGACTTCATCACTTACAATTAGGAGCTCTTCCTTTAATGGTTCCTGATATGGCAGGCTATCCTCA  
CATCCGTTACATTTTCATCAGGATTGGATGGAACATCATTAGAGGTCCTTTCAGGGGCAATTTTGAGGAACTGAT  
TCATTTGGAAGAAAGATTAGGCAATGTCAATCGTGGAGCATCCCAGGGGACAATTGAAAGATGTACATATCCACA  
TAAATACAAAAAGAGGAACTGCAGTGCACAAACAAGATGGGGAAGAAGGACTGAGGAAGACACAGAGGAAAAATG  
TACTATCTGTTTGTCTATTTTAGAGGAAGGTGAAGATGTGAGACGTCTTCCATGTATGCACCTTTTCCACCAAGT  
GTGTGTTGACCAATGGTTGATTACCAATAAGAAGTGCCCCATATGCAGAGTGGACATTGAGGCCAGCTGCCAAG  
TGAAAGTGAACACCATGTTTCAGAACTCTTGCCCTCCCTCTCATTCCCATCCTTCCCTGGTACTGCAGTCAACCAA  
AGATGGCATGACTTACCTGCGCAGATTTGGAAGCATTGAACCTTAGAGTGCTGGCTCTGCTATATGGTACAACATA  
TGCTAGACCTACAGTTTATGTATACAGTTGATTTTGATGTATTATATAAAGCTTTTTTCTAGATTGACATTT  
TTCTGTATCATTTTACTGTATTTTTCATGGTTCCCTTGATTTGCATTTCTTTGCACATATTATGGGCTGTGACC  
CTAAACTTGCAGGCAAGGTTAGCTGCTTTAGTAAGTAGAATTTTGTTGGTCTTTTTGTTTTTTACATAGTACCAAG  
CCTTGATAATTATGAATTTTTTATCCATTACTAACCTTTAATTTAATCAATCATGTACTTTAGTTTAAATGTATAA  
AGATCCTCTAGAAAATGATAATATTGTGTATTAAGACATTCCTTAATTAGGACAAAATGGCTGCTGTATATTTAC  
TATATGGAGTTCTGAGTTAAATACCATCCTTAATACTGGGAACAGAATACAACCCATATAAATCAGATGCAGGTG  
GTAGTCACATCACCAGAGTGATCAGTATAAATTTTCTTGGTGTATCCTTTTCTTCAACACAGTGCAGATAAGA  
GTTGAATATTGATATCATACATTTAGACTGCTGTTCTGATTGCATTTATCTTTTTCTACATCATTTAGAAATTT  
ATTTCCCTGATTCAGTTTTTGTGCTGTGAAACAGCTCTGATGAACACTAAATATTAATTTCAATTAGCTAGATT  
GTACATACTTGCAGATTTAACAAAATTTTAGGGAAATTGAAAAGACATGTAGAATTTGTTGTCTTCTGCTAAGC  
ACGAAAAGTTAAGATATCTGCTTACATTGATTTTGTAGACACATTAAGTCAAGATTTGGAATTTAAGTCACTGGC  
AGGTATCTGTGCATTCATAGAACTTATAAAGGTCCCAGGATCACTTTTAAGGGATTTTTATTAGTTTAAAGGTAA  
ATAAAGTCAGCTGAATCTACATGTCTCTTGTGTTTTTCTCTCTAACTTGAAAACAGTAAATCTGCAGATACTG  
TGAGGCACAAATTATACTGTCAACCTACTGTTGCTATGGTTATATACTCCCACTTCATACATTACCAAGAGTCA  
TCACTGATTTTAAATTTTAAATTTCTATAGTTAAGATTTACTGCATAATATAGAATATAAAGTTAAGTTAAGTAA  
CTAACATTTCTCCTTTGGAGGAAGTTTTAATCTACTTCAGGATGCATATTATTATCAAGTACTTTTATATACAG  
GATAGCCTAATTTTATTTGTTTAAATATGCTTAATATGCCCCAGATTGCAAATGCATCCAGTCAGTAATATCACT  
GTCTGTATGTGGAGGACATGTTCCCATGGATCATATGTGAAGATGTCAATAAGCTTGCATTAAAGCCACCTGCTTT  
GTAAGTGGATTGATTAATAAATAACTTATATTTCTAAAAA

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**FIGURE 4196**

MVPDMAGYPHIRYISSGLDGTSGPFRGNFEELIHLEERLGNVNRGASQGTIERCTYPHKYKKRKLHCKQDGEE  
GTEEDTEKCTICLSILEEGEDVRRLPCMHLFHQVCVDQWLITNKKCPICRV DIEAQLPSES

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**FIGURE 4197**

AATCCTGGAACAAGGCTACAGCGTCGAAGATCCCCAGCGCTGCGGGCTCGGAGAGCAGTCCTAACGGCGCCTCGT  
ACGCTAGTGTCTCCCTTTTTCAGTCCGCGTCCCTCCCTGGGCGGGCTGGCACTCTTGCCCTCCCGTCCCTCAT  
GGCGCTGCTCCGACGCCCCGACGGTGTCCAGTGATTGGAGAATATTGACACAGGAGTTAATTCTAAAGTTAAGAG  
TCATGTGACTATTAGGCGAAGCTTTTTAGAGAATAATTGGAAATAGAGTTACAACCAGAGCAGCACAAGTAGCTAA  
GAAAGCTCAGAACACCAAAGTTCAGTTCAACCCACCAAACAACAAATGTCAACAACAACCTGAAACCTACTGC  
TTCTGTCAAACCAGTACAGATGGAAAAGTTGGCTCCAAAGGGTCCTTCTCCACACCTGAGGATGTCTCCATGAA  
GGAAGAGAATCTCTGCCAAGCTTTTTCTGATGCCTTGCTCTGCAAAATCGAGGACATTGATAACGAAGATTGGGA  
GAACCCCTCAGCTCTGCAGTGAAGGATATCTATCAGTATCTCAGGCAGCTGGAGGTTTTGCAGTCCAT  
AAACCCACATTTCTTAGATGGAAGAGATATAAATGGACGCATGCGTGCCATCCTAGTGGATTGGCTGGTACAAGT  
CCACTCCAAGTTTAGGCTTCTGCAGGAGACTCTGTACATGTGCGTTGGCATTATGGATCGATTTTACAGGTTCA  
GCCAGTTTCCCGGAAGAAGCTTCAATTAGTTGGGATTACTGCTCTGCTCTTGGCTTCCAAGTATGAGGAGATGTT  
TTCTCCAAATATTGAAGACTTTGTTTACATCACAGACAATGCTTATACCAGTTCCCAAATCCGAGAAATGGAAAC  
TCTAATTTTGAAGAATTGAAATTTGAGTTGGGTCGACCCCTGCCACTACACTTCTTAAGGCGAGCATCAAAGC  
CGGGGAGGTTGATGTTGAACAGCACACTTTAGCCAAGTATTTGATGGAGCTGACTCTCATCGACTATGATATGGT  
GCATTATCATCCTTCTAAGGTAGCAGCAGCTGCTTCCTGCTTGTCTCAGAAGGTTCTAGGACAAGGAAAATGGAA  
CTTAAAGCAGCAGTATTACACAGGATACACAGAGAATGAAGTATTGGAAGTCATGCAGCACATGGCCAAGAATGT  
GGTGAAGTAAATGAAAACCTTAACATAATTCATCGCCATCAAGAATAAGTATGCAAGCAGCAAACTCCTGAAGAT  
CAGCATGATCCCTCAGCTGAACTCAAAGCCGTCAAAGACCTTGCCCTCCCACTGATAGGAAGGTCCTAGGCTGC  
CGTGGGCCCTGGGGATGTGTGCTTCATTGTGCCCTTTTCTTATTGGTTTAGAACTCTTGATTTGTACATAGTC  
CTCTGGTCTATCTCATGAAACCTCTTCTCAGACCAGTTTTCTAAACATATATTGAGGAAAAATAAAGCGATTGGT  
TTTTCTTAAGGTAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4198**

MALLRRPTVSSDLENIDTGVNSKVKSHVTIRRTVLEEIGNRVTTTRAAQVAKKAQNTKVPVQPTKTTNVNKQLKPT  
ASVKPVQMEKLAPKGPSPTEPDVSMKEENLCQAFSDALLCKIEDIDNEDWENPQLCSDYVKDIYQYLRQLEVLQS  
INPHFLDGRDINGRMRAILVDWLQVHVKFRLLOETLYMCVGIMDRFLQVQPVSRKKLQLVGITALLLASKYEEM  
FSPNIEDFVYITDNAYTSSQIREMETLILKELKFELGRPLPLHFLRRASKAGEVDVEQHTLAKYLMELTLIDYDM  
VHYHPSKVAAAASCLSQKVLGQGKWNLKQYYTGYTENEVLEVMQHMAKNVVKVNENLTKFIAIKNKYASSKLLK  
ISMIPQLNSKAVKDLASPLIGRS



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**FIGURE 4199A**

CGAGACTCAGCCAGAGGAGTACGGATTAAGTGGCCGAAGAAAGAGGAGTGAGGCAGGGGAGCGAGGCGGACGCTC  
CGAGCGCATCGGACTCACCTGGGCCGGCGGCGACCGGCGAGTACGAGTGGACTCTTGCCCTCCGCAGCATGCGCC  
CCGCTTGCTAAGTCGCCCGCGTCTCGCCCTCACCTAGCACCGCCAATCCCGCTGGATGGAGTCCCTCTGGGTT  
CCCATTGGCTCCTGTGAGTGTGGGTGTCGGGAGCCTGTTTTGGCGAGGGGAACCAACTTTTGAAGTTCGCC  
AGAAGACTGCGTTCCAGCCCCAGTTCCTCCGGCAGCGGGACCCGGCGAAGACGCGACCGCGGCGGAGTACCATG  
GGAAGCAAAGGTGTCTACAGTACCCTGGCAAAGCCACAATGTCAAGCACAGTGGTGTGGACGACATGGTGTCTA  
CTGTCCAAGATCACAGAGAATCCATCTGAGGAAATCTGAAGAAGAGATACATGGATGACTACATTTTTTACATAT  
ATAGGATCTGTATTATCTCAGTCAACCTTTCAAGCAGATGCCATATTTTGGGGAAAAGGAAATTGAAATGTAC  
CAAGGAGCGGCACAGTATGAAAACCCACCACATATCTATGCCCTTGCGAGATAATATGTACAGAAACATGATCATT  
GACAGAGAGAACCAGTGCCTCATTATCAGTGGTGAAAGTGGTGTCTGGAACACAGTGGCTGCCAAATATATCATG  
AGCTACATCTCCAGAGTGTCTGGAGGAGGGACCAAAGTCCAGCACGTGAAGGACATTATCTCGCAGTCCAACCCG  
CTGCTGGAGGCCTTCGGGAACGCCAAGACCGTCCGGAACAACAACCTCCAGCCGATTTGGAAAATACCTTTGAAATC  
CAGTTTCAGTCCAGGTGGGGAAACCAGATGGTGGAAAGATCTCCAACCTTCCTCTGGAAAAATCTAGGGTGGTGATG  
AGGAACCCAGGAGAGCGGAGTTTTTACATATTTTTACCAGCTCATCGAGGGCGCCTCTGCAGAGCAGAAACACAGC  
CTTGGCATCACCAGCATGGACTATTATTACTACCTGAGCCTCTCGGGCTCATACAAGGTTGATGACATTGACGAC  
AGGCGGGAGTTTTCAGGAAACTCTGCACGCCATGAATGTGATTGGGATCTTTCAGAGAAGACAAACGCTGGTGTG  
CAGATAGTGGCGGGTATTCTCCACCTGGGAAACATCAGCTTCAAAGAAGTTGGCAACTACGCGGCTGTGGAGAGT  
GAAGAGTTTTTAGCTTTTCTGTCATATCTGCTAGGGATAAACAGGACCGGTTGAAAGAAAAGCTAACAAAGCCGG  
CAGATGGATAGCAAGTGGGGAGGCAAATCCGAATCCATCCACGTGACCTCAACGTAGAGCAGGCCTGTTACACC  
CGGGATGCGCTCGCCAAGGCCCTGCACGCCCGGGTCTTTGATTTCTTGGTAGATTCCATCAATAAAGCCATGGAG  
AAAGACCATGAAGAATACAACATTGGCGTCTAGACATCTATGGCTTTGAAATATTCCAGAAAAATGGCTTTGAA  
CAGTTTTGTATCAATTTTGTAAATGAAAACTGCAGCAGATTTTTATTGAACTGACATTAAAGGCAGAACAGGAA  
GAATATGTTCAAGAGGGAATAAGATGGACACCCATTGAGTACTTTAATAATAAAATCGTATGTGACCTCATAGAG  
AACAAAGTGAACCTCTCTGGCATCATGAGCATCTGGATGACGTGTGCGCCACGATGCATGCGGTGGGTGAGGGG  
GCAGATCAGACGCTGCTCCAGAACTTCAGATGCAGATTGGGAGTCATGAGCACTTCAACAGTTGGAACCAAGGC  
TTCATCATTATCATTATGCTGGGAAGGTATCCTATGACATGGATGGCTTTTGTGAAAGGAACCGGGATGTGCTT  
TTTATGGATCTCATCGAGCTTATGCAGAGCAGCGAGCTGCCTTTCATAAAGTCTTTATTTCCGGAAAAATCTGCAG  
GCTGACAAGAAAGGGCGCCCAACTACTGCCGGAAGCAAAATAAAGAAACAAGCCAATGACCTTGTGAGCACCTG  
ATGAAATGTACGCCCCACTACATTGCTGTCATCAAGCCAAACGAAACCAAGAGCCAGAGACTGGGAGGAAAGC  
AGGGTAAAGCATCAAGTCAATATTTGGGTCTGAAAGAGAACATTGAGTGAGAAGAGCTGGCTATGCCTATCGG  
CGCATCTTCCAAAAATTCCTACAGAGGTATGCCATTCTGACCAAGCCACCTGGCTTCTTGGCAGGGAGAGGAG  
AAGCAAGGCGTCTGCACCTGCTGCAGTCGGTCAACATGGACAGCGACCAAGTTCAGCTGGGGAGGAGTAAAGTG  
TTCATCAAAGCCCCGAGTCTCTATTCTTTTAGAAGAGATGAGAGAGAGAAAGTATGATGGGTATGCTCGAGTG  
ATACAGAAATCATGGAGGAAATTCGTGGCCCGGAAGAAATACGTTCAAATGAGAGAAGAAGCCTCAGACCTCTTA  
TTGAACAAGAAGGAGAGAAGGAGAAACAGTATTAACAGGAACCTTTATAGGGGATTATATTGGGATGGAAGAGCAC  
CCAGAACTCCAGCAGTTCGTGGGCAAGAGGGAGAAAGATTGATTTCCGACAGACAGTCACCAAGTATGACAGGAGG  
TTCAAGGGTGTAAGCGAGACCTGCTCCTTACCCCAAAGTGCTTGTACTTAATCGGACGAGAAAAAGTCAAACAG  
GGCCAGACAAGGGCCTGGTGAAAGAAGTCTGAAGCGGAAATCGAGATAGAACGGATCTTGTCTGTGTCCCTC  
AGTACTATGCAGGATGACATTTTTATTCTCCATGAGCAAGAGTATGACAGTTTGCTTGAATCTGTCTTCAAACCT  
GAATTCCTAAGCCTCTTAGCAAAGCGTTACGAGGAGAAGACCCAGAAGCAACTACCTCTGAAATTCAGCAATACG  
CTTGAAGTGAAGTTGAAAAAGGAAAACTGGGGCCCTGGAGTGCAGGGGGCTCCCGGCAAGTGCAGTTCCACCAA  
GGGTTTGGGGACCTGGCTGTCTCAAGCCCAAGTAAACAAGTGTGTCAGGTGAGTATCGGACCTGGACTGCCCAAG  
AACTCCCGTCTACCAGAAGGAACACTACCCAAAATACAGGTTATTCCAGTGGGACTCAAAATGCCAACTACCCA  
GTGAGAGTGGCCCTCTCCCCAGGATACCATCAGAACGGAGTCATCAGAAACAGTATGTGCCATATCCCAT  
GCTCCTGGAAGCCAGAGGTCCAATCAGAAAAGCCTGTACACCTCCATGGCCCGCCGCTTGCCTCGGCAGCAG  
TCTACCAGTTCAGACCGAGTGTACAGACGCCAGAGAGCCTGGATTTCTCAAGGTCCCGGACCGAGGGAGCTGCA  
GGGGTCAGGAGACAAACAACAGTCCGCTCCCCAGCAGGGGGCAGACCCAAGCCCCAGCCCAAGCCCAAGCCT  
CAGGTGCCACAGTGAAGGCTTTGTATGCCTATGACGCTCAGGACACAGACGAACTCAGCTTTAATGCCAATGAC

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**FIGURE 4199B**

ATTATTGATATTATCAAAGAAGATCCTTCTGGCTGGTGGACGGGTCGACTACGAGGCAAGCAGGGCCTGTTCCCC  
AACAACTATGTGACCAAGATCTGAGGTGCCCCGTGACTCTGACACATGGGGCAGAGGAGCTCCAGGCACAGACCAG  
GGGAGGGGATATTTAGGGGCTCCCCTTACAATCCACAATGAGCAATTGCTTCTCCAAGGCCTGGAGCTATTCTGG  
TACCTTCCCCATGGAGGACACTGAAAAGGCTGGGTGGGGACAGGGAGTATCACTCCATAAGTGATCCTAAAAGG  
TAGCCTCTTCATAGGAACCCAGGAGGACAAAACCACCATGCATTAAGATTTATTTATTGTATTTAAACCTGGTGA  
GAGGACAAGTGAGGTCTGCTCAGACCTTGTAGGCTTCTATCAAAACAGCACCCCTGCTTGCTCACCAGGCCTAGAG  
AATGGCTGTAGGTGGCCGCTGACAAGTGCCTTTAGTTGAAGAGCACATTTCTTTCATCTCTCTTGTCATACCTG  
ATAGACACATTCCTCTCTGCCACCTTCCTTCAGGGAGGACCCGCCCTCTGCAGACTGGGCTTAGCGTGAGCAGGC  
ACTTCCCATGTACGTGCCAAGGGTAAGCTGGCCTGCTGAGCCCAGGGCGACAGAGGGGCACTGGTTTACACTTTG  
CCGGGACCATCAGGGCCGCCAAGCAGGTGAGGGGCTGGGGGCTGGGGGCTGGGCTGCTGGCTTTGCTTTCTCTGG  
GTCTTCAATTAGAAATGTGGCTGGCCCATATTGGTTTGTGTTTAAATGCTGTACTTACTACAAGAAGGATCTTTTT  
TCAAGCTGTACATTTATAAAAAACAGATCATATACTGTATATATAAAAAATCTTGAGATGGTAGAAACATGTATGAA  
TGTACTAAGTAGTATTCCACTGTACTCATTGATAAGGTAGGTTTTCTTACAAAACCTCACACCAGGTACTTAAAGA  
TGTGCTCTGCTTTTTTCCAACTACGGAGTGTCACTGCTTTCTAGGTGAGTCCCTGCAGACTCTTCTCAACTCTTT  
CCCTATAGGAAACTTACT

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**FIGURE 4200**

TTTTGGCTCTCTCACCAGCACCATGGCTGTTGGCAAGAACAAGCGCCTTACGAAAGGCGGCAAAAAGGGAGCCAA  
GAAGAAAGTGGTTGATCCATTTCTAAGAAAGATTGGTATGATGTGAAAGCACCTGCTATGTTCAATATAAGAAA  
TATTGGAAAGACGCTCGTCACCAGGACCCAAGGAACCAAAATTGCGTCTGATGGTCTCAAGGGTCGTGTGTTGA  
AGTGAGTCTTGCTGATTTGCAGAATGATGAAGTTGCATTTAGAAAATTCAAGCTGATTACTGAAGATGTTCAGGG  
TAAAAACTGCCTGACTAACTTCCATGGCATGGATCTTACCCGTGACAAAATGTGTTCCATGGTCAAAAAATGGCA  
GACAATGATTGAAGCTCACGTTGATGTCAAGACTACCGATGGTTACTTGCTTCGTCTGTTCTGTGTTGGTTTAC  
TAAAAACGCAAAAATCAGATACGGAAGACCTCTTATGCTCAGCACCAACAGGTCCGCCAAATCCGGAAGAAGAT  
GATGGAAATCATGATCCGAGAGGTGCAGACAAATGACTTGAAAGAAGTGGTCAATAAATTGATTCCAGACAGCAT  
TGGAAAAGACATAGAAAAGGCTTGCCAATCTATTTATCCTCTCCATGATGTCTTCGTTAGAAAAGTAAAAATGCT  
GAAGAAGCCCAAGTTTGAATTGGGAAAGCTCATGGAGCTTCATGGTGAAGGCAGTAGTTCTGGAAAAGCCACTGG  
GGACGAGACAGGTGCTAAAGTTGAACGAGCTGATGGATATGAACCACCAGTCCAAGAATCTGTTTAAAGTTCAGA  
CTTCAAATAGTGGCAAATAAAACGTGCTATTTGT

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**FIGURE 4201**

MAVGKNKRLTKGGKKGAKKKVVDPF SKKDWDYDVKAPAMFNIRNIGKTLVTRTQGTKIASDGLKGRVFEVSLADLQ  
NDEVAFRKFKLITEDVQGKNCLTNFHGMDLTRDKMCSMVKKWQTMIEAHVDVKTTDGYLLRLFCVGFTKKRKNQI  
RKTSYAHQQVRQIRKKMMEIMIREVQTNDLKEVVNKLIPDSIGKDIEKACQSIYPLHDVFVRKVKMLKKPKFEL  
GKLMELHGE GSSSGKATGDETGAVERADGYEPPVQESV

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**FIGURE 4202**

GTGTGGATGAGGTCACCATTTGTCAACATTTTGACCAACCGCAGCAATGCACAGAGACAGGATATTGCCTTCGCCT  
ACCAGAGAAGGACCAAAAAGGAACCTTGCATCAGCACTGAAGTCAGCCTTATCTGGCCACCTGGAGACGGTGATT  
TGGGCCTATTGAAGACACCTGCTCAGTATGACGCTTCTGAGCTAAAAGCTTCCATGAAGGGGCTGGGAACCGACG  
AGGACTCTCTCATTGAGATCATCTGCTCCAGAACCAACCAGGAGCTGCAGGAAATTAACAGAGTCTACAAGGAAA  
XX  
XXXXXGGTAGAAGAGCAGAGGATGGCTCTGTTCATTGATTATGAACTGATTGACCAAGATGCTCGGGATCTCTATG  
ACGCTGGAGTGAAGAGGAAAGGAACCTGATGTTCCCAAGTGGATCAGCATCATGACCGAGCGGAGCGTGCCCCACC  
TCCAGAAAGTATTTGATAGGTACAAGAGTTACAGCCCTTATGACATGTTGGAAAGCATCAGGAAAGAGGTTAAAG  
GAGACCTGGAAAATGCTTTCCTGAACCTGGTTCAGTGCATTGAGAACAGCCCTGTATTTTGCTGATCGGCTGT  
ATGACTCCATGAAGGGCAAGGGGACGCGAGATAAGGTCTGTATCAGAAATCATGGTCTCCCGCAGTGAAGTGGACA  
TGTTGAAAATTAGGTCTGAATTCAAGAGAAAGTACGGCAAGTCCCTGTACTATTATATCCAGCAAGACACTAAGG  
GCGACTACCAGAAAGCGCTGCTGTACCTGTGTGGTGGAGATGACTGAAGCCCGACACGGCCTGAGCGTCCAGAAA  
TGGTGCTCACCATGCTTCCAGCTAACAGGTCTAGAAAACCAGCTTGCGAATAACAGTCCCGTGGCCATCCCTGT  
GAGGGTGACGTTAGCATTACCCCCAACCTCATTTTAGTTGCCTAAGCATTGCCTGGCCTTCCTGTCTAGTCTCTC  
CTGTAAGCCAAAGAAATGAACATTCGAAGGAGTTGGAAGTGAAGTCTATGATGTGAAACACTTTGCCTCCTGTGT  
ACTGTGTCATAAACAGATGAATAAACTGAATTTGTACTTT

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**FIGURE 4203**

GTACTCGCCACGGCACCCAGGCTGCGCGCACGCGGTCCCAGTGTGCAGCTGGAGAGCGAGCGGCCACCGGGAGCC  
CCCCGCACAGCCCCGCGCCCCGCCCCGAGGAGCCCGCGAAGATGCCCCGCGCAGCCTGCACGCGGCGGCCGTGCT  
CCTGCTGGTGATCTTAAAGGAACAGCCTTCCAGCCCCGCCCCAGTGAACGGTTCCAAGTGGACTTATTTTGGTCC  
TGATGGGGAGAATAGCTGGTCCAAGAAGTACCCGTCGTGTGGGGCCTGCTGCAGTCCCCATAGACCTGCACAG  
TGACATCCTCCAGTATGACGCCAGCCTCACGCCCCCTCGAGTTCCAAGGCTACAATCTGTCTGCCAACAAGCAGTT  
TCTCCTGACCAACAATGGCCATTAGTGAAGCTGAACCTGCCCTCGGACATGCACATCCAGGGCCTCCAGTCTCG  
CTACAGTGCCACGCAGCTGCACCTGCACTGGGGGAACCCGAATGACCCGCGACGGCTCTGAGCACACCGTCAGCGG  
ACAGCACTTCGCGCCGAGCTGCACATTGTCCATTATACTCAGACCTTTATCCTGACGCCAGCACTGCCAGCAA  
CAAGTCAGAAGGCCTCGCTGTCTGGCTGTTCTCATTGAGATGGGCTCCTTCAATCCGTCCTATGACAAGATCTT  
CAGTCACCTTCAACATGTAAAGTACAAAGGCCAGGAAGCATTCTGTCGGGATTCAACATTGAAGAGCTGCTTCC  
GGAGAGGACCGCTGAATATTACCGCTACCGGGGGTCCCTGACCACACCCCTTGCAACCCCACTGTGCTCTGGAC  
AGTTTTCCGAAACCCCGTGCAAATTTCCAGGAGCAGCTGCTGGCTTTGGAGACAGCCCTGTACTGCACACACAT  
GGACGACCCCTTCCCCAGAGAAATGATCAACAACTTCCGGCAGGTCCAGAAGTTGATGAGAGGCTGGTATACAC  
CTCCTTCTCCCAAGTGCAAGTCTGTACTGCGGCAGGACTGAGTCTGGGCATCATCCTCTCACTGGCCCTGGCTGG  
CATTCTTGGCATCTGTATTGTGGTGGTGGTGCATTTGGCTTTTCAAGGAAGAGTATCAAAAAGGTGATAA  
CAAGGGAGTCATTTACAAGCCAGCCACCAAGATGGAGACTGAGGCCACGCTTGAGGTCCCCGGAGCTCCCCGGGC  
ACATCCAGGAAGGACCTTGCTTTGGACCCTACACACTTCGGCTCTCTGGACACTTGGACACCTCAAGGTGTTCT  
CTGTAGCTCAATCTGCAAACATGCCAGGCCCTCAGGGATCCTCTGCTGGGTGCCCTCTGCTTGGGACCATGGCC  
ACCCAGAGCCATCCGATCGATGGATGGATGCACTCTCAGACCAAGCAGCAGGAATTCAAAGCTGCTTGCTGTA  
ACTGTGTGAGATTGTGAAGTGGTCTGAATCTGGAATCACAAACCAAGCCATGCTGGTGGGCCATTATGGTTGG  
AAAACACTTTTCATCCGGGGCTTTGCCAGAGCGTGCTTTCAAGTGTCTGGAAGTCTGCTGCTTCTCCAAGCTT  
CAGACAAGAAATGTGCACTCTCTGCTTAGGTTTTGCTTGGGAACTCAACTTCTTCTCTGGAGACGGGGCATCT  
CCCTCTGATTTCTTCTGCTATGACAAAACCTTTAATCTGCACCTTACAACCTCGGGGACAAATGGGGACAGGAAG  
GATCAAGTTGTAGAGAGAAAAAGAAAACAAGAGATATACATTGTGATATATTAGGGACACTTTCACAGTCCCTGT  
CCTCTGGATCACAGACACTGCACAGACCTTAGGGAATGGCAGGTTCAAGTTCCACTTCTTGGTGGGATGAGAAG  
GGAGAGAGAGCTAGAGGGACAAAGAGAATGAGAAGACATGGATGATCTGGGAGAGTCTCACTTTGGAATCAGAAT  
TGGAATCACATTCTGTTTATCAAGCCATAATGTAAGGACAGAATAATACAATATTAAGTCCAAATCCAACCTCCT  
GTCAGTGGAGCAGTTATGTTTTTACTCTACAGATTTTACAAATAATGAGGCTGTTCTTGAATAATGTTGTTG  
CTGTGTCCTGGAGGAGACATGAGTCCGAGATGACCAATCTGCCCTTGAATCTGGAGGAAATAGGCAGAAACAA  
AATGACTGTAGAACTTATCTCTGTAGGCCAAATTTCACTTCAGCCACTTCTGCAGGATCCCTACTGCCAACCTG  
GAATGGAGACTTTTATCTACTTCTCTCTCTGAAGATGTCAAATCGTGGTTTAGATCAAAATATATTTCAAGCTA  
TAAAAGCAGGAGGTTATCTGTGCAGGGGGCTGGCATCATGTATTTAGGGGCAAGTAATAATGGAATGCTACTAAG  
ATACTCCATATTCTTCCCCGAATCACACAGACAGTTTCTGCAGGCGCAACTCCTCCATTTTCTCCCGCAGGTG  
CGAGAACTTTCTGATTCACAGTCTCATTTTGACAGCATGAAATGTCTCTTGAAGCATAGCTTTTTAAATATCTT  
TTTCTTCTACTCCTCCCTCTGACTCTAAGAATTCTCTCTTCTGGAATCGCTTGAACCCAGGAGGCGGAGGTTGC  
AGTAAGCCAAGGTCATGCCACTGCACTCTAGCCTGGGTGACAGAGCGAGACTCCATCTCAAAAAAAAAAAAAAA

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**FIGURE 4204**

MPRRSLHAAVLLLVILKEQPSSPAPVNGSKWTFGPDGENSWSKKYPSCGGLLQSPIDLHSDILQYDASLTPLE  
FQGYNLSANKQFLLTNNGHSVKLNLPSDMHIQGLQSRYSATQLHLHWGNPNDPHGSEHTVSGQHFAELHIVHYN  
SDLYPDASTASNKSEGLAVLAVLIEMGSFNPSYDKIFSHLQHVYKQGQAFVPGFNIEELLPERTAEYYRYRGS  
LTPPCNPTVLWTVFRNPVQISQEQLLALETALYCTHMDDPSPREMINNFRQVQKFDERLVYTSFSQVQVCTAAGL  
SLGIILSLALAGILGICIVVVSIWLFRRKSIKGDNKGVIYKPA TKMETEAHA

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**FIGURE 4205**GCAGATCGCTTGCAGCTTGCTAGCTGTGTGGGCTGGGAGGTCTGGTAGGGCTGAGCTTGCAAGAGGATCAACATG

CCTTTGGCTAGAGATTTACTACATCCGTCCTTGGAAGAGGAAAAGAAAAACATAAAAAGAAACGCCTAGTACAA  
AGTCCAAATTCTTACTTTATGGATGTAAAATGTCCAGGTTGCTACAAGATCACCACGGTTTTTCAGCCATGCTCAG  
ACAGTGGTTCTTTGTGTAGGTTGTTCAACAGTGTTGTGCCAGCCTACAGGAGGAAAGGCCAGACTCACAGAAGGG  
TGTTCAATTTAGAAGAAAGCAACACTTAATGATTCAAACAGCTTCCTGAATTTTAATTTTGTGTTGTCTCACAGAAA  
GCCTTATCATAAATTCCATAATTCTAATTAATTTACCAAGATAATGTAATTACATTTGGTTTTGTAAGGTATACA  
GCAGTAATCTCCTATTTTGGTGTCAGTTTTTCAATAAAGTTTTGATTATGGGCAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 4206**

MPLARDLLHPSLEEEKKKKKKRLVQSPNSYFMDVKCPGCKITTVFSHAQTVVLCVGCSTVLCQPTGGKARLTE  
GCSFRRKQH

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**FIGURE 4207**

CCGCGCGCTCGCCCCGCGCTCCTGCTGCAGCCCCAGGGCCCCTCGCCGCCGCCACCATGGACGCCATCAAGAAG  
AAGATGCAGATGCTGAAGCTCGACAAGGAGAACGCCTTGGATCGAGCTGAGCAGGCGGAGGCCGACAAGAAGGCG  
GCGGAAGACAGGAGCAAGCAGCTGGAAGATGAGCTGGTGTCACTGCAAAAGAACTCAAGGGCACC GAAGATGAA  
CTGGACAAATACTCTGAGGCTCTCAAAGATGCCCAGGAGAAGCTGGAGCTGGCAGAGAAAAAGGCCACCGATGCT  
GAAGCCGACGTAGCTTCTCTGAACAGACGCATCCAGCTGGTTGAGGAAGAGTTGGATCGTGCCAGGAGCGTCTG  
GCAACAGCTTTGCAGAAGCTGGAGGAAGCTGAGAAGGCAGCAGATGAGAGTGAGAGAGGCATGAAAGTCATTGAG  
AGTCGAGCCCCAAAAGATGAAGAAAAATGGAAATTCAGGAGATCCAAGTAAAGAGGCCAAGCACATTGCTGAA  
GATGCCGACCGCAAATATGAAGAGGTGGCCCGTAAGCTGGTCATCATTGAGAGCGACCTGGAACGTGCAGAGGAG  
CGGGCTGAGCTCTCAGAAGGCAAATGTGCCGAGCTTGAAGAAGAATTGAAAAGTGTGACGAACAACTTGAAGTCA  
CTGGAGGCTCAGGCTGAGAAGTACTCGCAGAAGGAAGACAGATATGAGGAAGAGATCAAGGTCCTTTCCGACAAG  
CTGAAGGAGGCTGAGACTCGGGCTGAGTTTGCGGAGAGGTCAGTAACTAAATTGGAGAAAAGCATTGATGACTTA  
GAAGACGAGCTGTACGCTCAGAACTGAAGTACAAAGCCATCAGCGAGGAGCTGGACCACGCTCTCAACGATATG  
ACTTCCATATAAGTTTCTTTGCTTCACTTCTCCCAAGACTCCCTCGTCGAGCTGGATGTCCCACCTCTCTGAGCT  
CTGCATTGTCTATTCTCCAGCTGACCTGGTTCTCTCTTAGCATCCTGCCTTAGAGCCAGGCACACACTGTG  
CTTTCTATTGTACAGAAGCTCTTCGTTTCAGTGTCAAATAAACACTGTGTAAAGCT

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**FIGURE 4208**

TTGATGCTCTAAATGCAGAATTAATGGAGACTTCAATGACTGATATGTCAATTCCTTAGTTTCTTTGAACATTTCC  
ATATTTCTCCTGTGAAGTTGCATTTGAGTTTGTCTTTGGGTTCCGGAGGTGAAGAATCAGACAAAAGAAAACAGG  
AAATGTTTGCAGTTCAATCTGTCAACTTGCTGTTGAAGAGCATAGGTGCTACTCTGACTGATGTGGATGACCTTA  
TATTCAAACTTGCTTATTATGAAATTCGATATCAGTTCTACAAGAGAGATCAGCTTATATGGAGTGTTGTTAGGC  
ATTACAGTGAACAGTTCTTGAAACAGATGTATGTCCTTGATTGGGGTTAGATGTAAGTTGAAACCCATTGAT  
TAATTAGAGGTTCTGTCTGAAGGAGTTGAAGCTTTATTCTATGAACCCCTCCAGGGTGCTGTTCAAGGCCCTGAAG  
AATTGTCAGAGGGGTTAGTGATTGGAGTGAGAAGCCTCTTGGACACACAGTAGGTGGTGCAGCAGGAGTTGTAT  
CTCGAATCACCAGTTCTGTTGGGAAAGGTTTGGCAGCAATTACAATGGACAAGGAATATCAGCAAAAAGAAGAG  
AAGAGTTGAGTCGACAGCCAGAGATTTTGGAGACAGCCTGGCCAGAGGAGGAAAGGGCTTTCTGCGAGGAGTTG  
TTGGTGGAGTGACTGGAATAATAACAAAACCTGTGGAAGGTGCCAAAAGGAAGGAGCTGCTGGATTCTTTAAAG  
GAATTGGAAGGGCTTGTGGGTGCTGTGGCCCGTCCAACCTGGTGAATCGTAGATATGGCCAGTAGTACCTTCC  
AAGGCATTGAGAGGGCAGCAGAATCAACTGAGGAAGTATCTAGCCTCCGTCCTCCCTCGCCTGATCCATGAAGATG  
GCATCATTGCTCCTTATGACAGACAGGAATCTGAGGGCTCTGACTTACTTGAGAATCATATCAAAAAGTTGGAAG  
GAGAGACTTACCGATACCACTGTGCTATTCTGGAAGCAAGAAGACAATCCTTATGGTTACAAATAGGCGAGTGT  
TGTTGATAAAGGAAGTTGAAATCCTGGGCCCTTATGTGTGTAGACTGGCAATGTCCATTTGAAGATTTTGTATTTT  
CTCCTAGTGTCAGTGAAAAATGTGCTAAAAATTTTCAAGTTAAGGAACAGGGTCTGTTCCACAAAAAGACAGTGCCA  
ATCAAGGCTGTGTTGAAAAAGTTTACCTGAAGGACACCGCCACAGCAGAGAGAGCATGTAATGCCATTGAGGATG  
CACAGTCAACGAGACAGCAGCAAAAATTGATGAAGCAGTCATCAGTGAGACTTCTCAGACCCCAATTGCCATCTT  
AATCACAGACCTCAGGGGCTCCAACAGGGAGAAAAACAATCACTGGTCTTGTCTATAAGTCACTCTGCTTTATC  
TTGCTAAAGACAATTTTCAAGCAATCCTTTAGTTTTAGTTTTCTGGAATAGCTAGTATTGGGTTTTCTAGTTTT  
TTCACCTTTTAGTTTTTACTCTAATTTTGTAAACCATGTATATGCTAGCAGTCCACTTCTACGCCACCACCCAAAT  
GGGTCAGACCTTGAAGAAACGTCACTTCAAACTCAGAATGAAATTTTCAATTAATATAAAATTTGTGAAGCAAAG  
GTCAATAGGCTTATATTTAATTAAAGCCTTACTGAAGAATAAGAAATGAGCTTAGAATGACTAGTGTTCTTTGAA  
AGGTTTTTTTTATTTTTGTTTTTTGGGGTTTTTTTTTTTTTTTTTTTGTAGACCGAGTCTTGCTCTGTCGCCCAGGCT  
GGAATGCAGTGGTGCGATCTTGGCTCACTGCAATCTCTGCTCTCGGGTTCAAGCGGTTCTACTGCCTCAGCCTC  
CTGAGTAGCTAGGATTACAGGTGTGTGCCACCACGCTGGGTAATTTTTTTTTTTTTTTTGTATTTTAGTAGAGAT  
GAGTTTCACCATGTTGGTCAGTCTAGTCTCGAACTCCTGACCTTGATCCGCATGCCTCAGCCTCCCAAAGTGC  
TGGGATTACAGGCATGAGCCACCACGGCCGCCAAAAGGCTTAAACCATGAACAAATGTTGGATCCTGACATTT  
TGTTAAGAGTGATTTGTTCAATAATTGAAGTGAAGTAACTTCTTGGTAAACAGGTAATTGAATGAAGAAAGG  
TCACTAAAGGGAGAAATGACATGTTTTCTATTTCTTTTTCATGAAAACACTGTTTTTCCCCCTAATAAAGCATAT  
TTTACTTTGGTGCTTATTTTCTCCTTGCAGTCTAATAAAAAAATCTGGACAATCAAACCTTAAATAGCTACA  
CTCTGCCCTCTGTAATGTAGCATTCAAAAAATTTGGAAGTATTTACATCCTCTTTCAAGATGAGCTTATATGAC  
ACAATTATTATTGCTGATACATGAAAATACTGCACCTTAAAGTTTCTCAAGACTCTGAAATATGTAAAATTCAT  
ATTTTATATTCCCAGAAATGTTTCTTACAGGTTGAAAGTCTTTAAGGGCATCACAATTAACATTTACTCCT  
AATGCACGCCTAGAAATGATTTTAAATACTTACTAAGAAGAATGAAATTTCTTGGTTGTTTTATATATAAATAA  
GGCATATATAATGACACTGTGTTCTGTGAGGGAGCAGGCCCTGTGAGAATCAATTCAGGACAGTATTTTTTTTG  
TCCTTCTCCATCCTTGATCAGAGATAAACTATTAACCTTTAAAAAATACTCAAAAATATGTAAGTTTTTTGGT  
TGAACCTTTAGATTTGCTCATAATGTTTAAACATAACAACATTTATTTCAAATCACTGAATTCATGGAGATGTGA  
CACGCTTGGTTTGCTCTATTTTGTATTATGTGTGATAGTGGTCTGTCTATCATCATTCATGTTTTTTAAGGCCTG  
GTCATAAACTTTAAATTTTACTAGTGTTACTTAATGTATATTCTAAAAAGAGAATGCAGTAACCTAATGCCCTAA  
ATGTTTGATCTCTGTTGTCTATTCTTTTCAAAATTTATTTTTCTGTAAAGTATAATATATAAACTTCTTGC  
TTAAATTGAATTTCTATATTAGTGTTAATTGCAGTTTATTAAGGGATCATTATCAGTAATTTATAGCAACTG  
TTCTAGTGTTTTGTGTTTTTAAACAGAATTAGGAATTTGAGATATCTGATTATATTTTTCATATGAATCACAGC  
TGTTGACAATGTCCCATATATTTAAGAAATTATATCATACTGATACTATTGTAAACATTTTGATTGATTTAATC  
TCCAGGGACAGAAATAATTCATTGGTAAAGTGAATAATGCGTTTTTTAAAAATGCTTTGAGAGGTAATTACTTG  
CATATGAGAGAAATAAACATTTGGCACATTGTTTACAGGTGTGAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4209**

METSMTDMSILSFFEHFHISPVKLHLSLSLGS GGEE SDKEKQEMFAVHSV NLLK SIGATLTDVDDLIFKLAYYE  
IRYQFYKRDQLIWSVVRHYSEQFLKQMYVLVLGLDVLGNPFGLIRGLSEGVEALFYEPFQGAVQGPEEFAEGLVI  
GVRSLFGHTVGAAGVVSRTG SVGKGLAAITMDKEYQ QKRREELSRQPRDFGDSLARGGKGF LRGVVGGVTGII  
TKPVEGAKKEGAAGFFKGIGKGLVGAVARPTGGIVDMASSTFQGIQRAAE STEEVSSLRPPRLIHEDGIIRPYDR  
QESEGS D LLENHIKKLEGETYRYHCAIPGSKKTI LMTNRRVLCIKEVEILGLMCVDWQCPFEDFVFPPSVSENV  
LKISVKEQGLFHKKDSANQGCVRKVYLKDTATAERACNAIEDAQSTRQQKLMKQSSVRLLRPQLPS

**FIGURE 4210**

[illegible]

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**FIGURE 4211**

AGACAGAGTCTCACTCTGCCGCCAGGCTGGAGTGCAAGTGGTGTGATCTGGGCTCACTGCAACCTCTGCCTCCTG  
GGTTCAAGCGATTCTCCTGCTTCAGCCTCCTGAGTAGCTGGGATTACAGTGCGTCACCATGCCCCGGCTAATTTTT  
GTATTTTATAGTGGAGATGGTGTTCCTCCATGTTGACCAGGCTAGTCTCAAACCTCCTGACTTCAGGTGATTCACCC  
GCCTCAGCTTCCCAAAGTGCTGGGATTACAGGCACGAGCCATCATGCCCCGCCATCAGTTCAATTAAATCTAGAT  
ATCACATTCTTCTATCCTTTTTTATTATACATGTCATGATATGGGATGTTGGTGGTAAATGTAACGTGGAGGAA  
CAAGACATATGTAGGTACACTCCTTGACTGCACACGACATGATTGGGCACCCCCAAGGTTCTGTGACTCCCCGAC  
CAGTGACCTGGAAATGCGCAATGGCCGGGTAGAGGCAAACGCATGCGTCCCAACAGTAATACACCTGTCAATGA  
GACAGCCACAGCCTCTGACAGCAAAGGGACCAGTAACAGCAGCAAAACCCGGGCAGGAGCCAATAGCAAAGGCCG  
TCGGGGCAGCCAGAATTCTTCAGAGCACCGCCACCTGCCAGCAGCACTTCTGAGGATGTCAAGGCCAGCCCTTC  
CTCAGCTAATAAGCGGAAAAACAACCCCTTTTCAGACATGGAGCTGAATTCTAGCTCAGAGGACTCCAAAGGGAG  
CAAGCGTGTCCTACTAATTCCATGGGCTCAGCCACTGGCCCCCTTCTGGGACAAAGGTAGAACCCTGTCTCT  
GGACAGAAACTGCCCCCTCCCCCTCCTAATTGACTGTCCCCACCCAACTGCAACAAGAAGTACAAGCACATCAA  
TGGACTTAAGTACCACCAAGCTCATGCCCATACAGATGATGACAGCAAGCCGGAAGCGGATGGGGACAGTGAGTA  
CGGAGAGGAACCTATTCTCCATGCAGATCTTGGGAGCTGCAACGGTGATCTGTCTCACAAAAGGTTCTTGTGTC  
CCCTGCCCCGCTCAGCTACCCCCAAAGTTCGACTTGTAGAGCCCCATAGCCCTTCTCCTTCAAGCAAATTCAGCAC  
AAAAGGCCTCTGTAAGAAAAAGTTGAGTGGGGAAGGGGACACAGACCTTGGGGCCTTATCCAATGATGGCTCTGA  
TGATGGACCTCAGTGATGGATGAAACAAGCAATGATGCCTTTGATTCTTTAGAAAGGAAGTGTATGG

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**FIGURE 4212**

MIGH PQGSVTPRPVTWKCAMAGVEANACVPTVIHL SMRQPQPLTAKGPVTA AKPGQEP IAKAVGAARILQSTAHL  
PAALLRMSRPALPQLISGKTNPFQTWS

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**FIGURE 4213**

CTCTCTCCGGTCCGTGCCTCCAAGATGACAAAGAAAAGAAGGAACAATGGTCGTGCCAAAAGGGCCGCGCCAC  
ATGCAGCCTATTCGCTGCACTAACTGTGCCCAGTGCCTGCCAAAGACAAGGCCATTAAGAAATTCGTCATTCTGA  
AACATAGTGGAGTCCGCAGCAGTCAGGGACATTTCTGAAGCGAGCGTCTTCGATGCCTATGTGCTTCCCAAGCTG  
TATGTGAAGCTGCATTACTGTGTGAGTTGTGCAATTCACAGCAAAGTAGTCAGGAATCGATCTCGTGAAGCCCGC  
AAGGACCGAACACCCCCACCCCGATTTAGACCTGCGGGTGCTGCCCCACGTCCCCACCAAAGCCCATGTAAGGA  
GGTGAGTTCTTAAAGACTGAAGACAGGCTATTCTCTGGAGAAAAATAAAATGGAAATTGTACTT



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**FIGURE 4214**

GTGAAACACCCTCGGCTGGGAAGTCAGTTCGTTCTCTCCTCTCCTCTCTTCTTGTGTTGAACATGCGGACTAA  
AGCAGACAGTGTTCCAGGCACTTACAGAAAAGTGGTGGCTGCTCGAGCCCCCAGAAAGGTGCTTGGTTCTTCCAC  
CTCTGCCACTAATTCGACATCAGTTTCATCGAGGAAAGCTGAAAAATAAATATGCAGGAGGGAACCCCGTTTGCGT  
GCGCCCAACTCCCAAGTGGCAAAAAGGAATTGGAGAATTCTTTAGGTTGTCCCCTAAAGATTCTGAAAAAGAGAA  
TCAGATTCTGAAGAGGCAGGAAGCAGTGGCTTAGGAAAAGCAAAGAGAAAAGCATGTCCTTTGCAACCTGATCA  
CACAAATGATGAAAAAGAAATAGAACTTTCTCATTTCATCTTTGAATAACGTCTCCTTGTTTACCCTGGTATTCTAG  
AATGTAAATTTACATAAATGTGTTTGTTCGAATTAGCTTTGTTGAACAGGCATTTAATTAAAAAATTTAGGTTTA  
AATTTAGATGTTTCAAAAGTAGTTGTGAAATTTGAGAATTTGTAAGACTAATTATGGTAACTTAGCTTAGTATTCA  
ATATAATGCATTGTTTGGTTTCTTTTACCAAATTAAGTGTCTAGTTCTTGCTAAAATCAAGTCATTGCATTGTGT  
TCTAATTACAAGTATGTTGTATTTGAGATTTGCTTAGATTGTTGTACTGCTGCCATTTTTATTGGTGTGTTGATTA  
TTGGAATGGTGCCATATTGTCCTCCTTCTACTTGCTTTAAAAAGCAGAGTTAGATTTTTGCACATTAAAAAATT  
CAGTATTAATT

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**FIGURE 4215**

MVRTKADSVPGTYRKVVAAARAPRKVLGSSTSATNSTSVSSRKAENKYAGGNPVCVRPTPKWQKGIGEFFRLSPKD  
SEKENQIPEEAGSSGLGKAKRKACPLQPDHTNDEKE

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**FIGURE 4216**

AATATGGTGCTAAAAGAACTCCTTACCTTTCTCTGACTACAATTTATTTGGACATACTTTTGTATTGAAGAGAGG  
TATACATACTGAAGCTACTTGCTGTACTATAGGAGACTCTGTCTGTAGGATCATGGACCATCCTAGTAGGGAAA  
AGGATGAAAGACAACGGACAATAAACCCATGGCACAAAGGAGTGACACTGCTCTCGACCATCTGGCTCCTCAT  
CGTCCTCTGGGGTTCTTATGGTGGGACCCAACTTCAGGGTTGGCAAGAAGATAGGATGTGGGAACTTCGGAGAGC  
TCAGATTAGGTAAAAATCTCTACACCAATGAATATGTAGCAATCAAACCTGGAACCAATAAAATCACGTGCTCCAC  
AGCTTCATTTAGAGTACAGATTTTATAAACAGCTTGGCAGTGCAGGTGAAGGTCTCCACAGGTGTATTACTTTG  
GACCATGTGGGAAATATAATGCCATGGTGTGGAGCTCCTTGGCCCTAGCTTGGAGGACTTGTGTTGACCTCTGTG  
ACCGAACATTTACTTTGAAGACGGTGTTAATGATAGCCATCCAGCTGCTTTCTCGAATGGAATACGTGCACTCAA  
AGAACCTCATTTACCGAGATGTCAAGCCAGAGAACTTCCTGATTGGTTCGACAAGGCAATAAGAAAGAGCATGTTA  
TACACATTATAGACTTTGGACTGGCCAAGGAATACATTGACCCCGAAACCAAAAAACACATACCTTATAGGGAAC  
ACAAAAGTTTAACTGGAAGTCAAGATATATGTCTATCAACACGCATCTTGGCAAAGAGCAAAGCCGGAGAGATG  
ATTTGGAAGCCCTAGGCCATATGTTTCATGTATTTCCTTCGAGGCAGCCTCCCCTGGCAAGGACTCAAGGCTGACA  
CATTAAAAGAGAGATATCAAAAAATTGGTGACACCAAAAGGAATACTCCCATTGAAGCTCTCTGTGAGAACTTTC  
CAGAGGAGATGGCAACCTACCTTCGATATGTACAGCGACTGGACTTCTTTGAAAAACCTGATTATGAGTATTAC  
GGACCTCTTCACAGACCTCTTTGAAAAGAAAGGCTACACCTTTGACTATGCCTATGATTGGGTTGGGAGACCTA  
TTCCTACTCCAGTAGGGTCAGTTCACGTAGATTCTGGTGCATCTGCAATAACTCGAGAAAGCCACACACATAGGG  
ATCGGCCATCACAAACAGCAGCCTCTTCGAAATCAGAGCCTTAGGACTGTTACAGCTGAGCATTATGATGTTAACA  
ACTCAGCCATCTGGCACAGGGGAAGAGGCACCTAAACAGATTCTTCTGGACAAAAGTCACATATGAGCAAGATCA  
GAATAGTAGCAGATGTAAAAGCAGAATGTATCATCAGAGCGCCGAGGAGAGTGGGAAATTCAGCCCAGCCGGCA  
GACCAATACCTCATACCTAACGTCTCACTTGGCTGCAGACCGCCATGGGGGATCAGTGCAGGTGGTTAGCTCAAC  
CAATGGAGAGCTGAATGTTGATGATCCCACGGGAGCCCCTCCAATGCACCAATCACAGCTCATGCCGAGGTGGA  
GGTAGTGGAGGAAGCTAAGTGCTGCTGTTTCTTTAAGAGGAAAAGGAAGAAGACTGCTCAGCGCCACAAGTGACC  
AGTGCCCTCCCAGGAGTCTCAGGCCCTGGGGACTCTGACTCAATTGTACCTGCAGCTCCTGCCATTTCTCATTGG  
AAGGGACTCCTCTTTGGGGGAGGGTGGATATCCAACTAAAAAGAAGAAAACAGATGCCCCAGAAGGGGCCAGT  
GCGGGCAGCCAGGGCCTAGTGGGTCAATTGGCCATCTCCGCCTGCCTAAGGCTCTGAGCAGGTCCCAGAGCTGCTG  
TTCTCCACTGCTTGCCCATAGGGCTGCCTGGTTGACTCTCCTTCCATTGTTTACAGTGAAGGTGTCATTACACA

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**FIGURE 4217**

MDHPSREKDERQRTTKPMAQRSAHCSRPSGSSSSSGVLMVGNFRVGGKIGCGNFGELRLGKNLYTNEYVAIKLE  
PIKSRAPQLHLEYRFYKQLGSAGEGLPQVYFPGCGKYNAMVLELLGPSLEDLFDLCDRTFTLKTVLMIAIQLLS  
RMEYVHSKNLIYRDVKPENFLIGRQGNKKEHVIHIIDFGLAKEYIDPETKKHIPYREHKSLTGATARYMSINTHLG  
KEQSRDDLEALGHMFMYFLRGSLPWQGLKADTLKERYQKIGDTRNTPIEALCENFPEEMATYLRVRRLDFFE  
KPDYEYLRTLFTDLFEKKGYTFDYAYDWVGRPIPTVGSVHVDSGASAITRESHTHDRPSQQQPLRNQSLRTVT  
AEHYDVNNSAIWHRGRGT

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**FIGURE 4218**

GGCACGAGGACGGCGCCCGCCCGCCCGCCCGGAGCCCGCGAGCAACCCAGTCCCCCCCCACCGCGCGTGGCGGGC  
CCGGCTCCCTAGCCACCGCGGCCCCACCCCTCTTCCGGCCTCAGCTGTCCGGGCTGCTTTCGCCTCCGCCTGTGGA  
TGCTGCGCCTCTCCGAACGCAACATGAAGGTGCTCCTTGCCGCCGCCCTCATCGCGGGGTCCGTCTTCTTCTCTGC  
TGCTGCCGGGACCTTCTGCGGCCGATGAGAAGAAGAAGGGGCCCAAAGTCACCGTCAAGGTGTATTTTGACCTAC  
GAATTGGAGATGAAGATGTAGGCCGGGTGATCTTTGGTCTCTTCGGAAGACTGTTCCAAAAACAGTGGATAATT  
TTGTGGCCTTAGCTACAGGAGAGAAAGGATTTGGCTACAAAAACAGCAAATTCATCGTGAATCAAGGACTTCA  
TGATCCAGGGCGGAGACTTCACCAGGGGAGATGGCACAGGAGGAAAGAGCATCTACGGTGAGCGCTTCCCCGATG  
AGAACTTCAAACCTGAAGCACTACGGGCCTGGCTGGGTGAGCATGGCCAACGCAGGCAAAGACACCAACGGCTCCC  
AGTTCTTCATCACGACAGTCAAGACAGCCTGGCTAGATGGCAAGCATGTGGTGTTTGGCAAAGTTCTAGAGGGCA  
TGGAGGTGGTGC GAAGGTGGAGAGCACCAAGACAGACAGCCGGGATAAACCCCTGAAGGATGTGATCATCGCAG  
ACTGCGGCAAGATCGAGGTGGAGAAGCCCTTTGCCATCGCCAAGGAGTAGGGCACAGGGACATCTTCTTTGAGT  
GACCGTCTGTGCAGGCCCTGTAGTCCGCCACAGGGCTTTGAGCTGCACTGGCCCCGGTGCTGGCATCTGGTGGAG  
CGGACCCACTCCCTCACATTCCACAGGCCCATGGACTCACTTTTGTAAACAACTCCTACCAACCCTGACCAATA  
AAAAAAATGTGGGTTTTTTTTTTTTTTTAAATAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4219**

MLRLSERNMKVLLAAALIAGSVFFLLLPGPSAADEKKKGPKVTVKVYFDLRIGDEDVGRVIFGLFGKTVPKTVDN  
FVALATGEKGFGYKNSKFHRVIKDFMIQGGDFTRGDGTGGKSIYGERFPDENFKLKHYGPWVSMANAGKDTNGS  
QFFITTVKTAWLDGKHVVFGKVLEGMEVVRKVESTKTDSRDKPLKDVIIADCGKIEVEKPFIAIAKE

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**FIGURE 4220**

TGCCTTTCGCTGCITGTTGGGGTTACAGGTGAAGGGGTTATGGGGTGAAGAACAACCCAGGGCCAGCGCTTGGCC  
TTCCCGCCACCGTGGCGGGCCGCCCGCGCTGTCTGTGAGGCGCCAGTTCCGGGGCGCTGCTCCCGGCCCTCCCCTC  
GCTCTGAGGCTCGGGGTCCCCAGCTCCGCGTAAACTGCACGATTTCCGCCCTCTGCTCAGCTCCCCTCTGCCCCCT  
CTTTCCAAGAGAGACTTCCAGATCCACATTTTCTTGACTGATTTTAAAGCATTTCTTCGTTTATAGCTGTCTGT  
TTGCATTCTGATTGGGAACACTGGGATCATTTCATCATGCCGACAGTGGTGGTAATGGATGTATCCCTTTCCAT  
GACCCGACCTGTGTCTATTGAGGGGTCCGAGGAATACCAGCGTAAGCACCTAGCAGCCCATGGTTTAAACGATGCT  
GTTTGAGCACATGGCCACAAATTACAAGCTTGAATTTACAGCACTTGTTGGTTTTTTCATCACTTTGGGAGTTGAT  
GGTCCCCCTTACGAGAGATTATAATACCCTACAGGAAGCACTAAGTAATATGGATGATTATGACAAAACCTGCTT  
GGAGTCTGCATTAGTTGGTGTGCAATATCGTTAGCAAGAATGGGGTGGTGCAATTCCTTGCCAGGTTGTCTT  
GGTGACAGACGCTGTCTTGGCATTGGTAGAGGGTCACTGCGACATTCCCTAGCCACTCAAAATCAACGAAGTGA  
GAGCAACAGGTTTCCACTACCTTTTCCCTTTCCCATCTAAGTTATATATCATGTGCATGGCGAATTTGGAGGAGCT  
CCAGAGCACCGATTCCCTTGGATGCCTTGAACGTCTCATAGATTTAAACAATGGTGAAGGGCAGATTTTACTAT  
TGATGGCCCCCTGTGCTTGAAGAATGTACAGTCTATGTTTGGAAAACCTGATAGATTTGGCATATACGCCCTTTCCA  
TGCTGTTCTCAAGTGTGGCCACCTAACTGCTGATGTACAAGTCTTCCCCAGGCCAGAACCTTTTGTGTGATAGTA  
AGAAATTGATCCTATCCCTAAAGTCATTAAACACAGATTTGGAATAGTGGGATTTATTGATATAGCTGATATTTT  
AAGTCCCCCAGTTCTGTCCAGACATCTGGTCTTACCTATAGCACTTAACAAAGAAGGTGATGAGGTGGTACTGG  
CATCACTGATGACAATGAAGATGAAAATTCAGCCAATCAGATTGCAGGCAAAATACCCAACCTTTTGTGTCCTGCT  
CCATGGTAGCCTAAAAGTGAAGGAATGGTAGCGATTGTTCAATTAGGTCTGAATGGCATGGAATGCTCTACTC  
CCAAGCTGACAGCAAGAAGAAATCAAACXTCATGATGTCTCTCTTTGAGCCTGGCCCCAGAACCTCTCCCATGGC  
TAGGGAAAATGGCACAGTTGGGTCTATTTAGATGCTAAAGAAAACCCCTTATGGCGAGGATGACAATAAGAGTC  
CATTCCCCCTGCAGCCCCAAAACAAACGCAGTTATGCCCAGAAATGTGACTGTCTGGATCAAACCCAGCGGCTGC  
AGACAGATGTACAGAAGATTTTAAAGAAATGCAAGGAACTACCTGAAAAAACACAGACATTCTATAAGGAGCTGA  
ACCGTTTGCAGAAAGGCCGCTCTAGCCTTTGGTTTCTTGGACCTGCTGAAAGGGGTGGCTGACATGCTGGAAGGG  
AATGCACACTGCTGCCTGAGACAGCCACCCCTGATGCTGCATTCCAGCTGACCCATGCTGCCAGCAGCTCAAGC  
TGGCCAGTACCGGCACCTCTGAGTATGCCGCTTATGACCAGAACATCACACCTTTGCACACGGACTTCTCTGGGA  
GCAGCACTGAAAGAATTTGAACTGACTTTTGGAGCTTTCCTTCTTTTTTCAATTTCAACTGAAAATGCTTTAGGT  
AAAAACCTTTCCAGTATGTTACCTCTAGAATAGCCACCCAAAGACCTTCCTGAGGCTGCCTCAGAAGCACCCT  
TGCTGTTTTGAATGACTCTACTAGTATGAGAAGGATGTGAAGGTGGTTGGCTGGTTGGGCTTTAACTTCTTGGGA  
TTCATAATTTTAAAGCTTGGAAGATAGCTGCTGTTCCCATGATGGGCACATTTCTGAGAAGCTTGAATGACTGA  
TGAGCATAGAGCACCCCTGCCTTCCTCAGGAAACCTGACCGGCAGGGGCTCTCTGGCTTCTGAAAGCTTCACCT  
CTTCCCTCGTTTATATCTCAACTGTAAGGGCATTTCAGCTTCTGTTTCATGGAATGAGCAACTCAGACTGTCTG  
GAGCTTGCTGAGTACAAACACACCACCACTAAGTTTCAGAACTTTCCTTAGAACTTGGGCAAAATGTGGTGGTAA  
CTCTTAAGTGCTTTTGGTATCTCTTGAGATTCTAACTTTTAAAGAGCAACCATTAAATGTGTAAAATGATTCTTAT  
TATCAAGGTTTTTTTTTAATGAAAATAAAATATTTGATTTCTAG

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**FIGURE 4221**

GAGCGTGGGGTATCTCGAGGTGCCGGGTTCAGGCGCTCAGGAGCGCTAGGGTTTGAGGCCTGCTTTCTGCTCGC  
GCCAGCAGAGCACTACCTGAGGCAGCGAGGCGCAGCGAGCCTAGCCTCCCCGCGCCCTGGGCAGTGTGGCCATGG  
AGAATCAGGTGTTGACGCCGCATGTCTACTGGGCTCAGCGACACCGCGAGCTATATCTGCGCGTGGAGCTGAGTG  
ACGTACAGAACCCTGCCATCAGCATCACTGAAAACGTGCTGCATTTCAAAGCTCAAGGACATGGTGCCAAAGGAG  
ACAATGTCTATGAATTTACCTGGAGTTCTTAGACCTTGTGAAACCAGAGCCTGTTTACAAACTGACCCAGAGGC  
AGGTAAACATTACAGTACAGAAGAAAGTGAGTCAGTGGTGGGAGAGACTCACAAAGCAGGAAAAGCGACCACTGT  
TTTTGGCTCCTGACTTTGATCGTTGGCTGGATGAATCTGATGCGGAAATGGAGCTCAGAGCTAAGGAAGAAGAGC  
GCCTAAATAAACTCCGACTGGAAAGCGAAGGCTCTCCTGAAACTCTTACAAACTTAAGGAAAGGATACCTGTTTA  
TGTATAATCTTGTGCAATTCTTGGGATTCTCCTGGATCTTTGTCAACCTGACTGTGCGATTCTGTATCTTGGGAA  
AAGAGTCCTTTTATGACACATTCCATACTGTGGCTGACATGATGTATTTCTGCCAGATGCTGGCAGTTGTGGAAA  
CTATCAATGCAGCAATTGGAGTCACTACGTCACCGGTGCTGCCTTCTCTGATCCAGCTTCTTGAAGAAATTTTA  
TTTTGTTTATCATCTTTGGCACCATTGGAAGAAATGCAGAACAAAGCTGTGGTTTTCTTTGTGTTTTATTTGTGGA  
GTGCAATTGAAATTTTTCAGGTACTCTTTCTACATGCTGACGTGCATTGACATGGATTGGAAGGTGCTCACATGGC  
TTCGTTACACTCTGTGGATTCCCTTATATCCACTGGGATGTTTGGCGGAAGCTGTCTCAGTGATTGAGTCCATT  
CAATATTCAATGAGACCGGACGATTGAGTTTACATTGCCATATCCAGTGAAAATCAAAGTTAGATTTTCCTTTT  
TTCTTCAGATTTTATCTTATAATGATATTTTGGTTTATACATAAATTTTCGTCACCTTTATAAACAGCGCAGAC  
GGCGCTATGGACAAAAAAGAAAAAGATCCACTAAAAAGAAAGATTTAGATGGCTTCTTGCCAGTTTGAGCCTAA  
TCTGATTCTTACAGTTTTACCTTCTTGAACCAATGTAAAAGTTTTTTTAAATGTTAAATGATTAAATCTCAGTGA  
GGCTATCTTCCTTTTCCCCAGTAACATTCTGAATTTACTGTTATCTTATTGTAGTACTTGCATGACATGGATT  
CTGATATCTGATGAGAGGTTTATTCTTGTGTATTGAGTTAATGACACCAAAAGGCTCAGCCACCCCAACCCTAT  
CTCATGTTGAGTCTGTCTAATACATGCCAGAGATTTTTTTTTTCAAAAAGTGCTTTATCCCTACAATGTAAGTACA  
GTTCTTACAGTTGAGATTTGTTCTTTTTCAGCTATTGCTTGTGAAAAAAGCAAGACTATGTCACCTCTATAGAAGG  
CTGTTAAAGTGACTCAGGCA



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**FIGURE 4222A**

GGCACGAGGTCACCTGCCGTCCAGGTATCATCCTAGTCTTCCCTCCGTCTCTGGGATGGGAACTCTTGTCTAGT  
GATGTGACTCATTACGTGATCCCAGACTGGAAAGTTGTTCAAGATTATCTTGAGATCCTTGAGTTTCCTGAGTTG  
AAGGGAATTATTTTCATGCAGACAGCTTGTCAAGCTGTGCAGCATCAAAGAGGCAGGAGACAGTATAACAACTG  
CGAAACCTGCTGAAGGATGCGCGTCATGATTGCATTCTCTTTGCTAATGAATTCCAGCAATGCTGCTATCTGCCA  
CGGGAAAGAGGAGAGTCCATGGAGAAGTGGCAGACCAGGAGCATATACAACGCAGCTGTTTGGTACTATCATCAC  
TGCCAGGACAGGATGCCAATTGTTATGGTGACAGAAGATGAAGAGGCAATTCAGCAGTATGGAAGTGAAACAGAA  
GGAGTATTCGTGATTACTTTCAAGAATTACCTGGACAATTTCTGGCCTGATTTAAAAGCTGCCCACGAGCTTTGT  
GATTCTATCCTTCAGTCTCGACGGGAGAGAGAGAATGAGAGTCAGGAGAGCCATGGGAAGGAGTACCCAGAACAT  
CTTCCCCTGGAAGTGTTAGAAGCTGGGATTAAATCTGGACGCTATATCCAGGGAATTCGAAATGTCAACAAACAC  
AGAGCCCAAATAGAAGCTTTTGTTCGACTTCAAGGAGCCAGCAGTAAAGATTAGTCAAGTATGACATCCTA  
ATCCACGGGATGAAGGCTCGAAACCGCTCAATTCATGGAGATGTGGTAGTTGTGGAGCTGCTTCTAAAAATGAA  
TGGAAGGAAGAACCGTAGCCCTGTGTGAGAATGACTGTGACGACAAGGCTTCGGGCGAGTCCCCAAGTGAGCCC  
ATGCCTACAGGTGCGAGTGGTGGGCATACTTCAGAAGAACTGGCGGGATTATGTGGTGACATTTCCGTCCAAAGAA  
GAGGTCCAATCTCAGGGCAAAAATGCTCAGAAAATCCTGGTTACACCTTGGGATTACAGAATTCCTCAAAATTCGA  
ATTAGCACTCAGCAAGCAGAAACCTCCAGGACTTCAGGGTGGTCTGTCGCATCGATTCTCTGGGAGTCAACATCT  
GTGTATCCAAACGGACATTTTGTGCGTGTTTTAGGAAGAATCGGAGATCTGGAAGGGGAAATGCAACCATCCTG  
GTGGAAGACAGTATTTCAAGTATTCCTTTCTCAGAAGCTCAGATGTGTGAGATGCCAGTAAACACACCAGAAAGT  
CCCTGGAAGGTGAGTCTGAAGAGGAACAAAACGTAAAGACTTGAGGAAAAGCCATCTCGTATTCAGCATTGAC  
CCCAAAGGTTGTGAAGATGTGGATGACACACTCTCAGTCAGAACCTTAAATAATGGCAACCTGGAACCTTGGGGTC  
CACATCGCAGATGTAACACACTTTGTGGCACCAATTCCTTACATTGATATTGAAGCTAGAACAAGGGCCACCACT  
TATTATCTAGCAGATCGTCGCTATGACATGCTGCCCTCCGTCTCAGTCAGATTTGTGTTCCCTTCTGGGAGGC  
GTTGATAGGTATGCTGTAAGCATCATGTGGAACTGGATAAAGCCTCTTATGAAATTAAGAAAGTGTGGTATGGC  
AGAACCATTATTTCGATCAGCATACAACTGTTCTATGAAGCAGCCCAAGAACTACTGGATGGAACTTAAGCGTT  
GTTGATGATATTCCAGAATTCAAAGACTTGGATGAGAAGAGCAGACAAGCCAAGCTGGAGGAGTTGGTGTGGGCA  
ATTGGAAGCTGACCGACATAGCTCGCCATGTCTAGAGCTAAACGAGACGGATGTGGTGGCTTGGAACTGGAAGGG  
GTAGAGGTTTGGCTACAGCTAGATGACAAAAGAACATTACGACCTCATCCCCAAGCAGCCCCCTGGAAGTCCAC  
GAGACAGTGGCTGAATGCATGATCCTGGCCAACCACTGGGTGCGCAAAAAGATCTGGGAGAGCTTCCCTCATCAG  
GCCTTGCTGCGCCAGCACCTCTCCACACCAGGAGTTCTTTTCAGAACTCCGGGAATGTGCTAAAGCCAAGGC  
TTCTTCATAGATACCGGTCCAATAAAACACTGGCTGATTCTCTGGATAATGCGAACGACCCCCACGATCCCATT  
GTGAACAGGCTACTGCGCTCCATGGCCACGCAGGCCATGTGCAATGCTCTGTACTTCTCCACCGGATCCTGTGCG  
GAGGAGGAGTTCCATCATTACGGTCTTGCATTAGATAAATATACCCACTTTACTTCTCCAATAAGAAGATATTCA  
GATATTGTAGTACACCGCTTGTAAATGGCAGCCATTTCAAAAGATAAGAAAATGGAATTAAGGGAAATCTGTTT  
AGCAACAAAGATCTTGAGGAATTATGCAGACATATCAACAACAGAAACCAAGCAGCACAGCATTCTCAGAAGCAG  
TCTACTGAGCTCTTCCAGTGCATGTACTTCAAAGACAAAGACCCTGCCACCGAGGAGCGTTGCATATCTGACGGA  
GTTATTTATTCAATTAGAACAATGGTGTGCTTCTATTTATACCAAGGTTTGGGATTAAAGGTGCTGCTTATCTA  
AAAAATAAAGATGGTTTAGTCACTCATGTGGCCAGATAGCTGTTCTGAATGGAACCAAGGATCCCTTCAACGA  
TTTCAAAACAAAATTACCTCTACTACAACAGATGGGGAATCTGTTACGTTCCATTTGTTTGACCATGTAACCGTA  
AGAATATCCATACAGGCCTCACGTTGCCATTCTGATACAATCAGACTTGAAATAATTAGTAACAAACCATACAAG  
ATACCAATACAGAACTTATTCATCAGAGTTCCCTTGTCTGAAGAGTGAGTTAGTGAAAGAAGTAACATAAATCT  
GTGGAAGAAGCTCAGCTTGCCCAAGAAGTCAAAGTAAACATCATTACAGGAGGAATATCAAGAATATCGCCAAACA  
AAGGGAAGGAGCCTATACACACTTCTAGAGGAGATACGGGACCTAGCTCTCCTGGATGTTTCAAACAATTATGGA  
ATATGAGAGGCTCTTACTTCACTAAGAGCTGTCTATGTGAATGTTTACAGTCTTTTCAAACCTTAACATTTAAT  
GTGTGTCACTCAGTGTCTAGTCATCAGGACTGGGTAGCTATTTTCGCATATATGTAAAATGTTCTCAGCCGGGC  
ACGGTGGCTACGCTGTAAACCCAGCACTTTGGGAGGCTGAGGCGGCGGATCACGAGGTGAGGAGATTGAGAC  
CATCCTGGCTAACACGGTGAAACCCAGTCTCTACTAAAAATACAAAATTAGCCCGGCTGGTGGCATGCGCCTG  
TAGTCCCAGCTACTTGGGAGGCTGAAGCAGGAGAATTGCCTGAACCCAGGAAGAGGAGTTGCAGTGAGCCGAGA  
TCGCACCACTGCATTCCAGCTTGGGCAACAGAGCGAGACTCCATCTCAAAAAAAAAAAAAAAAAAAAAAAGTT  
CTCTCATTCAATAAGTTGCATTAAATAAAGTATAATTAGGTCACTATGGAACAGTTTTCAGTAATGAGTGAC

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**FIGURE 4222B**

AGTAAGTGGTGGCTCTGCAGATGGCCCCTTCTAATAAGTTTAATAAACCCGAAATTACTGGTTAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAA

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**FIGURE 4223**

MQTACQAVQHQRGRQYNKLRNLLKDARHDCILFANEFQCCYLPRERGESMEKWQTRSIYNAAVWYYHHCQDRM  
PIVMVTEDEEAIQQYGSETEGVFVITFKNYLDNFWPDLKAAHELCDASILQSRRERENESQESHGKEYPEHLPLEV  
LEAGIKSGRYIQGILNVNKHRAQIEAFVRLQGASSKSDLVSDILIHGMKARNRSIHGDVVVVELLPKNEWKGRT  
VALCENDCDDKASGESPEPMTGRVVGILQKNWRDYVVTFPSKEEVQSQGKNAQKILVTPWDYRIPKIRISTQQ  
AETLQDFRVVVRIDSWESTSVYPNGHFVRVLGRIGDLEGEIATILVENSISVIPFSEAQMCEMPVNTPESPWKVS  
PEEEQKRKDLRKSHLVFSIDPKGCEVDVDTLSVRTLNNGNLELGVHIADVTHFVAPNSYIDIEARTRATTYYLAD  
RRYDMLPSVLSADLCSLLGGVDRYAVSIMWELDKASYEIKKVWYGRTIIRSAYKLFYEAAQELLDGNLSVVDDIP  
EFKDLDEKSRQAKLEELVWAIGKLTDIARHVRAKRDGCGALELEGVEVCVQLDDKKNIHDLIPKQPLEVHETVAE  
CMILANHWVAKKIWESFPHQALLRQHPPPHQEFFSELRECAKAKGFFIDTRSNTLADSLDNANDPHDPIVNRLL  
RSMATQAMSNALYFSTGSCAEFEFHHYGLALDKYTHFTSPIRRYS DIVVHRLMAAISKDKKMEIKGNLFSNKDL  
EELCRHINNRNQAQHSQKQSTELFQCMYFKDKDPATEERCISDGVIIYSIRTNGVLLFIPRFGIKGAAYLKNKDG  
LVISCGPDSCEWKPGSLQRFQNKITSTTTDGESVTFHLFDHVTVRISIQASRCHSDTIRLEIISNKPYPKIPNTE  
LIHQSSPLLKSELVKEVTKSVEEAQLAQEVKNIIQEEYQEYRQTKGRSLYTLLEEIRDLALLDVSNNYGI

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**FIGURE 4224**

GAACCGCCCCGCGCTGGGAATTTGCGGCGGCCTCCGCCGGGGCAGCCGAGCTGAACCGGTCTCTTCTCGGAAAG  
GCAGGGCCGAGGGGCTGCGGGGCAGCCATGGAGGCGACGCGGAGGCGGCAGCACCTGGGAGCGACGGGCGGGCC  
AGGCGCGCAGCTGGGCGCCTCCTTCTGTCAGGCCAGGCATGGCTCTGTGAGCGCTGATGAGGCTGCCCCGACGGC  
TCCCTTCCACCTCGACCTCTGGTTCTACTTCACACTGCAGAACTGGGTTCTGGACTTTGGGCGTCCCATTGCCAT  
GCTGGTATTCCCTCTCGAGTGGTTTCCACTCAACAAGCCAGTGTGGGGACTACTTCCACATGGCCTACAACGT  
CATCACGCCCTTTCTCTTGTCTCAAGCTCATCGAGCGGTCCCCCGCACCTGCCACGCTCCATCACGTACGTGAG  
CATCATCATCTTCATCATGGGTGCCAGCATCCACCTGGTGGGTGACTCTGTCAACCACCGCCTGCTCTTCAGTGG  
CTACCAGCACCACTGTCTGTCCGTGAGAACCCCATCATCAAGAATCTCAAGCCGGAGACGCTGATCGACTCCTT  
TGAGCTGCTCTACTATTATGATGAGTACCTGGGTCACTGCATGTGGTACATCCCCTTCTTCTCATCCTCTTCAT  
GTACTTCAGCGGCTGCTTTACTGCCTCTAAAGCTGAGAGCTTGATTCCAGGGCCTGCCCTGCTCCTGGTGGCACC  
CAGTGGCCTGTACTACTGGTACCTGGTCACCGAGGGCCAGATCTTCATCCTCTTCATCTTCACCTTCTTCGCCAT  
GCTGGCCCTCGTCTGTCACCAGAAGCGCAAGCGCCTCTTCCTGGACAGCAACGGCCTCTTCTCTTCTCCTCCTT  
CGCACTGACCCCTCTTGCTTGTGGCGCTCTGGGTGCGCTGGCTGTGGAATGACCTGTTCTCAGGAAGAAGTACCC  
GGGTGTCATCTACGTCCCTGAGCCCTGGGCTTTCTACACCCTTCACGTGACGAGTCGGCACTGAGTCCCTGGCAC  
CAGGCTCTGGCGCTCTGCTGGGTGGGAGGGTGGGCCATGGAGGGCATCTGAATACAGGAGTAGGGGGGGTGTGGG  
TGTGTAACCAGAGACCGAGAGCATGAGTGGGTGTGCGCTCGTGTGCGTGGATTCTGTGTGTGTGTGTGTGTGTGT  
ATATGTGTGCGCAGAGTGCATCATTTTCAGACTCTACTATTTCCGTCAAGTTTCTGTTTGATTGGATCATCTCA  
GGATCGGATTCTGTTTTAGAGTGTCTTGGGCCAGGATCCGGGCCCCCTGCCCTCCTCTGCACCTGACCACACTCC  
CTACTCAGGGCTAGTCTGTTCTTCCCGGACATCTTCTGGTAGCCGTGCAGGAGAGGGCTGGGTGGGGCAGAGGCC  
AGGAGGGGACCTGGTGTGTACCTGCCCACCCTGGCTCATCCCTCAGGCCACCCCTGACCCTACATTACATAG  
GTTACGTGAGCCTACTGTGGCTGTTGAGCAAAGCATTTCTCCTTTCTGGGCCTCATTGCACTAGATGGGCCTGT  
GGTCCCAAAGTAGGTGAGTAGGTTGGGGTTGCTGACACCCTTGGGTGACGCTTTGGGACAGATGAGTGGCTCTG  
TCCTGTCACTGCCCTCTCCCTGCTGGGGGCTATGTGCACTCCAGACCCCTGCCAGGCTCAGGCCCATGAGGTA  
TGGAGACACCTTGGCCCCAGGAGCTGGAGGCACCGCCCACTCCCTGGCATTCCAGCTTTCAGGTGACCCCTCC  
TCTACCCAAAGCTCTGTCCCCCTGCTCCCACTCCAGAAGAACTGCGGCACGTGCTTCGGGCAGCCTAGCCACAGG  
CTTTGAGCGCCTGCATTCCCTGGGGGCTGGAGGGTGGGGTGCCAAAGGCCCTGAGCAAAAGCCAGAGCTCCTCTCA  
TCAAAGCCTTTACAAGGTACTGGGCCAGAGGCTTTGCCTTGACAGAGTGGCCAGGGTTTCAAGGGAGGAGGAA  
CCTCCCCCTACCTAGGACCCCTTCTGTGGGGGTCTACAGAGTCAGGGACAGAAGGAAGGGACCCACAGGAAGT  
CACAGTGGTGCCAGGGATGTGTGAGCCCCAGCCACGGGGACGCGGGATTCAAGAATGAAGTAAATACAGTCAC  
AGCCCCAA

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**FIGURE 4225**

MEATRRRQHLGATGGPGAQLGASFLQARHGVSADAAARTAPFHLDLWFYFTLQNWVLDGRPIAMLVFPLEWFP  
LNKPSVGDYFHMAYNVITPFLLLKLIERSPRTLPRSITYVSIIIFIMGASIHVGDVSVNHRLLFSGYQHHLVRE  
NPIIKNLKPETLIDSFELLYYYDEYLGHCMWYIPFFLILFMYFSGCFTASKAESLIPGALLLVAPSGLYYWYLV  
TEGQIFILFIFTFFAMLALVLHQKRKRLFLDSNGLFLFSSFALTLLLVALWVAWLWNPVLRKKYPGVIYVPEPW  
AFYTLHVSSRH

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**FIGURE 4226**

GGCACGAGGCGCTCTTGCGGGAGCGTTCCGCATCGCCCCGGGGGCCCCCTACGCGAGGATCTCCGGGGCCGTTGGC  
AGCGCCTGGCACTTCTGAGCTCGGCGGACGAGAGCCTGCAGGTTTCTCCAGTCAGGGACGGCGAAGGGCGGAAA  
GCGCAGGAGGAGGAGTGTAGGCTTAGGCCGGGTGGGCCGGGTGAGGAGAGACGCGCCCATCTTTCGCCATCC  
GGGTGCGCGAGGTCTCTCGGGACCCGGCCGGCGACCCGTAGCTCGGGCACGCGCCTGTGCGATCCCGCAGGAA  
GGAGGGGTCCGGCTGAGGCCCGGGCGGGCGTCCGCCATGGAGATCCCCTCGGTCCAGGGCCGGCGCCTGGGACC  
TGGCGGGCGGCCCTGACCGCCTTCTCCCTGCGCGGGCTGGGTGCGGGACGTGCCCTTCGCGGCACTCGGCCTCC  
TCTGCGTCTCCGCTTCCCTGGGCCGCACTGCTGCCCTGGGCGCGGGCGGGCGACGGCGCCCTGTTGAATGGGCT  
GTGAGGGCCAGGTTTAAAGCGCTGGCGAACGCGGCCCTCCGGGGGCGCACGGCAGCTGCAGCGGTGGCGACCAAA  
CGGGTGTGGAGTTGGCGGGCGGCCATGGAGGGCCTGGCTGGCTATGTATACAAGCGGCCAGCGAGGGCAAGGTG  
CTGACTCTGGCCGCCCTTGCTTCTCAACCGGTCTGAAAGCGACATCCGCTATCTGCTTGGCTATGTCAGCCAGCAG  
GGAGGGCAGCGCTCCACGCCCTCATCATCGCAGCCCGCAATGGACACGCAAAGGTGGTACGCTTGCTCTTAGAA  
CATTACCGGGTGCAGACTCAGCAGACTGGCACCGTCCGCTTCGACGGGTATGTCATTGATGGTGGCACTGCTCTT  
TGGTGTGAGCTGGAGCAGGACATTTTGAAGTTGTTAACTTCTAGTCAGCCATGGAGCCAAAGTGAACCATAC  
ACAGTAACATAATTCAACCCCCCTGCGGCAGCATGCTTTGATGGCAGACTGGACATTGTGAAATACTTGGTTGAA  
AATAATGCCAACATCAGCATTGCCAACAAATATGACAACCTGCCTAATGATTGCGGCATATAAGGGACACACT  
GATGTGGTCAGATACCTTTTAGAACAACTGCTGATCCCAATGCCAAAGCACATTGTGGAGCCACAGCATTGCAC  
TTTGACGCTGAAGCTGGGCACATAGATATTGTGAAAGAGCTGATAAAATGGCGTGCTGCTATAGTAGTGAATGGC  
CATGGGATGACGCCATTGAAAGTAGCTGCCGAAAGCTGTAAAGCTGATGTCGTAGAACTGTTACTCTCTCATGCT  
GATTGCGACCGAAGAAGTCGGATTGAAGCTTTGGAACCTCTGGGTGCCCTCCTTGCAAATGACCGTGAGAACTAT  
GACATCATAAAGACATACCACTATCTATATTAGCCATGTTAGAGAGGTTCCAAGATGGTGATAACATTCTCGAA  
AAAGAGGTTCTTCCACCAATCCATGCTTATGGGAATAGAACTGAATGTAGAAATCCTCAGGAACCTGGAGTCCATT  
CGGCAAGACAGAGATGCTCTTCATATGGAAGGCCTTAGTTCGGGAACGGATTTAGGTGCTGACAATATTGAT  
GTTTCTCATCCCATCATTTTACAGAGGAGCTGTTATGCGGATAATATGGAATTTGAGCAGTGTATCAAGTTGTGG  
CTTTCATGCCCTGCACCTCAGACAAAAAGGTAAACAGGAACACCCACAAGGATCTTCTCGATTGCTCAAGTTTTC  
TCACAAATGATACATTTGAATGAACTGTGAAGGCCCCAGACATAGAATGTGTTTGGAGATGCAGTGTGTTGGAA  
ATAGAACAAAGTATGAACAGAGTGAAAAATATTTAGATGCTGATGTCCACAATGCTATGGACAATTATGAATGT  
AATCTCTATACCTTTCTGTATTTAGTGTGCATCTCTACCAAAACACAGTGCAGCGAAGAAGATCAGTGCAAAATT  
AACAAGCAGATCTACAACCTGATTACCTTGATCCCGAAGCTCGTGAAGGTTTACCTTGCTGCATCTGGCTGTC  
AACTCCAATACTCCAGTTGATGATTTCACACCAATGACGTCTGCAGCTTTCCAAATGCACTTGTACAAAGCTC  
CTGCTGGACTGTGGTGTGAGGTGAATGCCGTGGACAATGAGGGAAACAGTGCCTTCATATTATCGTTCAGTAC  
AACAGGCCCCATCAGTGATTTTTGACCTTGCACTCCATCATCATTAGCCTAGTTGAAGCCGGAGCTCACACTGAC  
ATGACGAATAAACAGAAATAAGACTCCGCTAGACAAAAGTACAACCTGGGTATCTGAAATACTGCTTAAACTCAA  
ATGAAGATGAGTCTCAAGTGCCCTGGCTGCCCCGAGCAGTTCGGGCTAATGACATTAACTACCAAGACCAGATCCCC  
AGAACTCTTGAAGAGTTTGTGGATTTCATTAAAGTACTGGATATGTAAAGTCGTTTAAATGTGGTGCTAAAAAGT  
AAAGGACTTTTAATCACAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4227**

MEGLAGYVYKAASEGKVLTLAALLLNRSSEDIRYLLGYVSQGGQSTPLIIAARNGHAKVVRLLEHYRVQTQQ  
TGTVRFDGYVIDGATALWCAAGAGHFEVVKLLVSHGANVNHTTVTNSTPLRAACFDGRLDIVKYLVENNANISIA  
NKYDNTCLMIAAYKGHTDVVRYLLEQRADPNKAHCGATALHFAAEAGHIDIVKELIKWRAAIVVNGHGMTPLKV  
AAESCKADVVELLSHADCDRRSRIEALLEGASFANDRENYDIIKTYHYLYLAMLERFQDGNILEKEVLPPIH  
AYGNRTECRNPQELESIRQDRDALHMEGLIVRERILGADNIDVSHPIIYRGAVYADNMEFEQCIKLWLHALHLRQ  
KGNRNTHKDLLRFAQVFSQMIHLNETVKAPDIECVLRCSVLEIEQSMNRVKNISDADVHNAMDNYECNLYTFLYL  
VCISTKTQCSEEDQCKINKQIYNLIHLDPRTREGFTLLHLAVNSNTPVDDFHTNDVCSFPNALVTKLLDCCGAEV  
NAVDNEGNSALHIIVQYNRPISDFLTLHSIIISLVEAGAHTDMTNKQNKTPDKSTTGVSEILLKTQMKMSLKCL  
AARAVRANDINYQDQIPRTLEEFVGFH

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**FIGURE 4228**

CCTTTCCTCAGCTGCCGCCAAGGTGCTCGGTCTTCCGAGGAAGCTAAGGCTGCGTTGGGGTGAGGCCCTCACTT  
CATCCGGCGACTAGCACCGCGTCCGGCAGCGCCAGCCCTACACTCGCCCGCGCCATGGCCTCTGTCTCCGAGCTC  
GCCTGCACTACTCGGCCCTCATTCTGCACGACGATGAGGTGACAGTCACGGAGGATAAGATCAATGCCCTCATT  
AAAGCAGCCGGTGTAATGTTGAGCCTTTTTGGCCTGGCTTGTGTTGCAAAGGCCCTGGCCAACGTCAACATTGGG  
AGCCTCATCTGCAATGTAGGGGCCGGTGGACCTGCTCCAGCAGCTGGTGCTGCACCAGCAGGAGGTCTGCCCCC  
TCCACTGCTGCTGCTCCAGCTGAGGAGAAGAAAGTGGAAGCAAAGAAAGAAGAATCCGAGGAGTCTGATGATGAC  
ATGGGCTTTGGTCTTTTTGACTAAACCTCTTTTATAACATGTTCAATAAAAAGCTGAACTTT



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**FIGURE 4229**

MASVSELACIYSALILHDDEVTVTEDKINALIKAAGVNVEPFWPGGLFAKALANVNIGSLICNVGAGGPAPAAGAA  
PAGGPAPSTAAAPAEKKVEAKKEESEESDDDMGFGFLFD

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## FIGURE 4230A

CGCAGGTGCGAGGCAGGTGGGGCTGGTACAGCCCGCGCCGCTCTGCTGCAGCCGCTGCCGTCTACTCCTTGCGC  
GCTGGCACTCCGCAGCCTTTAAGGTTTCGCGCGGGGGCCAGGCAAGAGTTAGCCATGAAGAGCCTCAAGTCCCGCC  
TGAGGAGGCGAGGACGTGCCGGCCCCGCGTCGCTGCGCGCCGCCCGCCAGCGCGCATGCAGCAGATTGGAATA  
AATATGATGACCGATTGATGAAAGCAGCAGAAAGGGGGGATGTAGAAAAAGTGACCTCAATCCTTGCTAAAAAGG  
GGGTCAATCCAGGCAAACCTAGATGTGGAAGGCAGATCTGTCTTCCATGTTGTGACCTCAAAGGGGAATCTTGAGT  
GTTTGAATGCCATCCTTATACATGGAGTTGATATTACAACAGTGACACTGCAGGGAGAAATGCTCTTCACCTGG  
CTGCTAAGTATGGACATGCATTGTGCCTACAAAACTTCTACAGTACAATTGTCCCACTGAGCATGCAGACCTGC  
AGGGAAGAACTGCACCTTCCAGATGCCGCAATGGCAGATTGTCTTCTAGCATACAGCTGCTTTGTGACCATGGGG  
CCTCTGTGAATGCCAAAGATGTAGACGGGCGGACACCCTTGTCTGGCTACTCAGATGAGTAGGCCAACAAATAT  
GTCAACTGCTGATAGATAGAGGAGCGGATGTTAATTCCAGAGACAAACAAAACAGAACTGCCCTCATGCTAGGTT  
GCGAATATGGTTGCAGAGATGCAGTAGAAGTCTTAATTAATAAATGGTGCTGATATAAGCTTGCTGGATGCGCTTG  
GCCATGATAGTTCTTACTATGCAAGAATTGGTGACAATCTGGACATTCTAACCTTGTGAAGACTGCATCGGAAA  
ATACCAACAAAGGGAGAGAACTTTGGAAGAAAGGGCCATCTTTGCAACAGCGAAATTTGACACACATGCAAGATG  
AAGTAAATGTGAAGTCACATCAGAGGGAGCATCAAAATATTTCAGGATTTGGAGATTGAAAATGAAGATTTGAAAG  
AGAGGTTGAGAAAAATTCAGCAAGAACAAGAATACTTTTGGATAAAGTCAATGTTTACAGTTACAGCTGAATG  
AGGAAGTTATGGTTGCTGATGATCTGGAAGCGAGAGAGAAAAGCTGAAGTCCCTTTTGGCAGCTAAAGAAAAGC  
AACATGAAGAAAGCTTAAGGACTATTGAGGCTCTGAAAAATAGATTTAAATATTTTGAAGTGATCATTAGGAT  
CAGGAAGTCATTTAGTAACCGAAAAGAAGATATGCTTCTTAAACAAGGTCAGATGTATATGGCAGACTCACAGT  
GTACTTCCCCAGGTATACCAGCCCATATGCAAAGCAGATCTATGTTAAGACCTCTGGAACTATCTTTACCCAGTC  
AAACGTCATACTCTGAAAATGAAATTTTAAAGAAAGAGTTAGAAGCAATGCGAACTTTCTGTGAGTCAGCAAAAC  
AAGACCGACTGAAGCTCCAAAATGAAGTGGCACACAAAGTGGCAGAATGCAAAGCTTTAGCATTAGAATGTGAAA  
GGGTCAAGGAGGATTAGATGAACAGATAAAGCAATTAGAAGATGCATTAAAAGATGTGCAGAAGAGGATGTATG  
AGTCAGAAGGTAAAGTTAAACAAATGCAGACCCATTTTCTTGCCCTTAAAGAACCTTAACAAGTGAAGCAGCCT  
CAGGGAATCACAGACTAACCGAGGAAGTGAAGGATCAGTTGAAAGACTTGAAAGTAAAATATGAAGGTGCTTCAG  
CAGAAGTGGGGAAATTAAGAAACCAATCAACAAAATAGATGATAGTAGAAGAGTTAAGAGGGATGAAGGCA  
AGCTGATAGAAGAAAATAAGCGATTACAGAAGGAAGTCTAGTATGTGTGAAATGGAGCGAGAGAAGAAAGGAAGAA  
AGGTCACAGAGATGGAAGGCCAGGCAAAAGAAATTGTGAGCGAAGTTGGCCCTTTCCATTCCAGCTGAAAAATTTG  
AAAACATGAAGAGCTCATTATCAATGAAGTGAATGAGAAAGCAAAAAAATTAGTAGAAATGGAAGAGAAACATG  
AAAAATCACTTAGTGAAATTAGACAGTTAAAGAGAGAACTTGAGAATGTTAAGGCCAAGCTTGCTCAGCAGCTCA  
AACCAGAGGAACATGAACAGGTTAAGAGCAGATTAGAACAGAAATCAGGAGAACTTGGGAAGAAGATCACTGAGT  
TAACATTGAAAAATCAGACACTACAAAAGGAAATTGAAAAAGTTTATTTGGATAATAAGCTCCTCAAGGAGCAAG  
CACATAACTTAACAATTGAAATGAAAAATCATTATGTTCTTTAAAGTAAGTGAAGACATGAAAAAGTCACATG  
ATGCAATTATTGATGATCTTAATAGAAAGCTTTTAGATGTAACACAAAAATATACAGAAAAGAAGTTGGAATGG  
AGAAATTGCTACTGGAAAATGACAGCTTAAGTAAGGATGTAAGCCGCCTAGAAACTGTGTTTGTACCTCCTGAGA  
AACATGAAAAAGAGATAATAGCTCTGAAATCCAATATTGTTGAACTTAAGAAACAGCTGTCTGAACTTAAGAAAA  
AATGTGGTGAAGACCAGGAGAAAAATACACGCTCTCACATCTGAAAACACTAAGTGAAGAAGATGATGAGTAATC  
AGTATGTGCCAGTTAAACCCATGAAGAGGTTAAATGACACTGAATGACACGTTAGCCAAAACCTAACAGAGAAT  
TATTAGATGTGAAGAAAAAATTTGAAGATATAATCAGGAATTTGTAATAAATAAGATAAGAATGAAATATTAA  
AAAGAAACCTGGAACAACTCAGAACCAATAAAAGCTGAGTACATCAGCCTGGCAGAGCACGAGGCAAAGATGA  
GCTCGTAAGTCAGAGCATGAGAAAGGTGCAGGATAGTAATGCTGAAATCTTGCCAACTACAGAAAAGGCCAAG  
AAGAGATTGTGACACTGCATGCCGAAATTAAGGCCAGAGAAGGAGCTCGACACAATACAAGAATGCATTAAAG  
TAAATACGCCCAATTGTGAGCTTTGAGGAGTGCAGAGAGAAAATTTAAAGCAACAGAGAAAGAACTAAAAGACC  
AGTTATCAGAGCAGACAAAAAGTATAGTGTGAGTGAAGAAGAGTCAAGAAAAACAAGCAAGAGAATGACAAGT  
TAAAGAAGGAGATTTTTACCCTTCAGAAAGATTGAGAGATAAGACAGTTCTCATTGAGAAGTCTCATGAAATGG  
AAAGAGCATTAAAGCAGAAAAACAGACGAGCTAAACAAACAGTTAAAGACTTGTACAGAAATACACGGAAGTAA  
AGAATGTGAAGAGAAGCTAGTAGAAGAAAATGCCAAACAGACTTCTGAGATACTTGACAGTCAAAATCTTTTGC  
AAAAACAACATGTTCCATTGGAACAGGTTGAGGCTCTGAAAAATCTCTTAATGGCACAATTGAAATCTAAAGG  
AAGAACTGAAGAGTATGCAAGGTGTTACGAGAAAGAGCAGCAGACAGTGACCAACTGCATCAATTGTTGGAGA

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**FIGURE 4230B**

ATCAAAAGAACTCTTCTGTACCCCTGGCAGAGCATTTCAGATTAAAGAAGCATTGAGAAAGAAGTTGGAATCA  
TAAAAGCCAGCTTGAGAGAAAAGGAAGAAGAAAGCCAAAACAAAATGGAAGAAGTCTCCAACTTCAGTCGGAGG  
TTCAGAATACTAAACAAGCATTAAAAAATTAGAGACTAGAGAGGTAGTTGACTTGTCTAAATATAAAGCAACAA  
AAAGTGATTTGGAGACACAGATTTCTAGCTTAAATGAAAAATTGGCCAATCTGAATAGAAAGTATGAGGAAGTAT  
GTGAGGAAGTTTTGCATGCCAAAAAGAAGGAAATATCTGCAAAAGATGAGAAGGAATTACTGCATTTCAGCATTG  
AGCAAGAAATTAAGGATCAGAAGGAACGATGTGATAAGTCCTTAACAACAATCACAGAGTTACAAAGAAGAATAC  
AAGAATCTGCTAAACAAATAGAAGCAAAAGATAATAAGATAACTGAACTGCTTAATGATGTGGAAAGATTAAAC  
AGGCACCTCAATGGCCTTTCCCAACTCACCTACACAAGTGGGAACCCACCAAGAGGCAGAGCCAGCTGATTGACA  
CTCTGCAGCACCAAGTGAATCTCTGGAGCAACAGCTGGCCGATGCTGACAGACAGCACCAAGAAGTAATTGCAA  
TTTATCGGACACACCTTCTTAGTGCTGCACAGGGTCACATGGATGAAGATGTTCCAGGAGGCTCTGCTCCAGATCA  
TACAAATGCGGCAGGGGCTTGTGTGCTTAGCCGTTAGCACTGACTGCCAGTATCTGTTTTATCTTGCTGGTGCTGA  
ACATTCTTTGTGCAACTCCATGGTCTTTCTGGGCCTTACTGTGCTGGTATAATTAAATAAAATATATTTTGTTCT  
T

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**FIGURE 4231**

MKSLKSRLRRQDVPGPASSGAAAASAHADWNKYDDRLMKAERGDVEKVTSILAKKGVNPGKLDVEGRSVFHVV  
TSKGNLECLNAILIHGVDITTSDTAGRNALHLAAKYGHALCLQKLLQYNCPTTEHADLQGRALTALFLKAMADCPSSI  
QLLCDHGASVNAKDVDGRTPLVLATQMSRPTICQLLIDRGADVNSRDKNRTALMLGCEYGCRAVEVLKNGAD  
ISLLDALGHDSSYYARIGDNLDDILTLLKTASENTNKGRELWKKGPSLQQRNLTHMQDEVNVKSHQREHQNIDLE  
IENEDLKERLRKIQQEQRILLDKVNGLQLQLNEEVMVADDLESEREKLKSLAAKEKQHEESLRTIEALKNRFKY  
FESDHLGSGSHFSNRKEDMLLKQGMADMSQCTSPGIPAHMQSRSMRLRPLELSLPSQTSYSENEILKKELEAMR  
TFCESAKQDRLKLQNELAHKVAECKALALECERVKEDSDEQIKQLEDALKDVQKRMYESSEGVKVMQTHFLALKE  
HLTSEAASGNHRLTEELKDQLKDLKVYEGASAEVGLRNQIKQNEMIVEEFKRDEGLIEENKRLQKELSMCEM  
EREKKGRKVTEMEGQAKELSAKLALSIPAEEKFENMKSSLSNEVNEKAKKLVEMEREHEKSLSEIRQLKRELENVK  
AKLAQHVKEEHEQVKSRLQKSGELGKKITELTLKNQTLQKEIEKVYLDNKLLEQAHNLTIEMKNHYVPLKVS  
EDMKKSHDAIIDDLNRKLLDVTQKYTEKKLEMEKLLLENDLSKDVSRLETVFPPEKHEKEIIALKSNIVELKK  
QLSELKKKCGEDQEKIHALTSENTNLKKMMSNQYVPVKTHEEVKMTLNDTLAKTNRELDDVKKKFEDINQEFVKI  
KDKNEILKRNLENTQNQIKAEYISLAEHEAKMSSLSQSMRKVQDSNAEILANYRKGQEEIVTLHAEIKAQKKELD  
TIQECIKVKYAPIVSFECEKRFKATEKELKDQLSEQTQKYSVSEEEVKKNKQENDKLKKEIFTLQKDLRDKTVL  
IEKSHMERALSARKTDELNKQLKDLKQKYTEVKNVKEKLVEENAKQTSEILAVQNLLQKQHVPLEQVEALKKSLN  
GTIENLKEELKSMQRCYEKEQQTVTKLHQLLENQKNSSVPLAEHLQIKEAFEKEVGIKASLREKEEESQNKMEE  
VSKLQSEVQNTKQALKKLETREVVDLSKYKATKSDLETQISSNEKLANLNRKYEEVCEVLHAKKKEISAKDEK  
ELLHFSIEQEIKDQKERCDSLTITITELQRRIQESAKQIEAKDNKITELNDVERLKQALNGLSQLTYTSGNPTK  
RQSQLIDTLQHVKSLQQLADADRQHQEVIAIYRTHLLSAAQGHMDEDVQEALLQIIQMRQGLVC

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**FIGURE 4232**

GCAGTCACTGCCGACCGGCTGGCTGGGCCTTGCGGCGTGAGGACCCCGGCGCGCCGCGAGTCCCGCGAGCCATGG  
CCCAGTCCGGCGGGGAGGCTCGGCCCGGGCCCAAGACGGCGGTGCAGATCCGCGTCGCCATCCAGGAGGCCGAGG  
ACGTGGACGAGTTGGAGGACGAGGAGGAGGGGGCGGAGACTCGGGGCGCCGGGGACCCGGCCCGGTACCTCAGCC  
CCGGCTGGGGCAGCGCGAGCGAGGAGGAGCCGAGCCGCGGGCACAGTGGCACCCTGCAAGTGGAGGTGAGAATG  
AGCGTGAGGACCTGGAGCAGGAGTGAAGCCCCCGGATGAGGAGTTGATCAAGAACTGGTGGATCAGATCGAAT  
TCTGCTTTTCTGATGAAAACCTGGAGAAGGACGCCTTTTGTCTAAAACAGTGAAGGAGGAACAAGCTGGGATATG  
TGAGCGTTAAGCTACTCACAATCCTTCAAAAAGGTGAAACATCTTACACGGGACTGGAGAACCACAGCACATGCTT  
TGAAGTATTCAAGTGGTCTTGAATGAGGACCACCGGAAGGTGAGGAGGACCACCCCGTCCCCTGTTCC  
CCAACGAGAACCTCCCCAGCAAGATGCTCCTGGTCTATGATCTCTACTTGTCTCCTAAGCTGTGGGCTCTGGCCA  
CCCCCAGAAGAATGGAAGGGTGCAAGAGAAGGTGATGGAACACCTGCTCAAGCTTTTGGGACTTTTGGAGTCA  
TCTCATCAGTGCAGATCCTCAAACCTGGGAGAGAGCTGCCCCCTGACATCCGGAGGATCAGCAGCCGCTACAGCC  
AAGTGGGGACCCAGGAGTGCGCCATCGTGGAGTTCGAGGAGGTGGAAGCAGCCATCAAAGCCCATGAGTTCATGA  
TCACAGAATCTCAGGGCAAAGAGAATGAAAGCTGTCTGATTGGTATGAAGCCACCCAAAAAGAAACCTGCCA  
AAGACAAAATCATGACGAGGAGCCCACTGCGAGCATCCACCTGAACAAGTCCCTGAACAAGAGAGTCGAGGAGC  
TTCAGTACATGGGTGATGAGTCTTCTGCCAACAGCTCCTCTGACCCCGAGAGCAACCCACATCCCCTATGGCGG  
GCCGACGGCACGCGGCCACCAACAAGCTCAGCCCGTCTGGCCACCAGAATCTCTTCTGAGTCCAAATGCCTCCC  
CGTGACAAGTCTTGGAGCAGCCCCCTTGGCCCAACGCAAAGGCGTTTCCAGAAAGTCCCCACTGGCGGAGGAAG  
GTAGACTGAAGTGCAGCACCAGCCCTGAGATCTTCCGCAAGTGTATGGATTATTCCTCTGACAGCAGCGTCACTC  
CCTCTGGCAGCCCCCTGGGTCCGGAGGCGTCGCCAAGCCGAGATGGGGACCCAGGAGAAAAGCCCCGGTACGAGTC  
CCCTGCTCTCCCGAAGATGCAGACTGCAGATGGGCTACCCGTAGGGGTGCTGAGGTTGCCAGGGGTCTTGACA  
ACACCAGAGGATTTTCATGGCCATGAGAGGAGCAGGGCCTGTGTATTAATACCTTCTATTTTTAATAACAAGCTCCA  
CTGAAAACACCTTCGTTTTCAAGGTTCTGACAAACACCTGGCATGACAGAATGGAATTCGTTCCCCTTTGAGAG  
ATTTTTTATTCATGTAGACCTCTTAATTTATCTATCTGTAATATACATAAATCGGTACGCCATGGTTTGAAGACC  
ACCTTCTAGTTCAGGACTCCTGTTCTTCCCAGCATGGCCACTATTTTGATGATGGCTGATGTGTGTGAGTGTGAT  
GGCCCTGAAGGGCTGTAGGACGGAGGTTCCCTGGGGGAAGTCTGTTCTTTGGTATGGAATTTTCTCTCTTCTTT  
GGTATGGAATTTTCCCTTCAGTGAAGTGTCTCGATAGGCCATGCAAGGGCTTCTGAGAGTTCAGGAAA  
GTTCTCTGTGCAACAGCAAGTAGCTAAGCCTATAGCATGGTGTCTTGTAGGACCAAAATCGATGTTACCTGTCAA  
GTAAATAAATAATAAAACACCCAACCTGGGAGTGCTG

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**FIGURE 4233**

MAQSGGEARPGPKTAVQIRVAIQEAEDVDELEDEEEGAETRGAGDPARYLSPGWGSASEEPPSRGHS GTTASGGE  
NEREDLEQEWKPPDEELIKKLVDQIEFCFSDENLEKDAFLKHKVRRNKLGYVSVKLLTSFKVKHLTRDWRTTAH  
ALKYSVVLELNEDHRKVRRRTTPVPLFPNENLPSKMLLVYDLYLSPKLWALATPQKNGRVQEKVMEHLLKLFGTG  
VISSVRILKPGRELPPDIRRISSRYSQVGTQECAIVEFEEVEAAIKAHEFMITESQGKENMKAVLIGMKPPKKKP  
AKDKNHDEEPTASIHNLKSLNKRVEELQYMGDESSANSSSDPESNPTSPMAGRRHAATNKLSPSGHQNLFLSPNA  
SPCTSPWSSPLAQRKGVSRKSPLAEEGRINCSTSP EIFRKCMDYSSDSSVTPSGSPWVRRRRQAEMGTQEKSPGT  
SPLLSRKMQTADGLPVGVLRLPRGPDNTRGFHGH ERSRACV

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**FIGURE 4234**

ATGTCCATCAGGGTGACCCAGAAGTCCTACAAGATGTCCACCTCTGGCCCCGGGCCTTCAGCAGCTGCTCCTAC  
ACAAGCTCTACACACCCAAAGAAGGAGCAGATCAAGGCCCTCAACAACAAGTTTGCCTCCTTCATAGACAAGGTA  
TGGTTCTTGGAGCAGCAGAACAAGATGCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAAGATGGCTCGGAAC  
AACAAGAACAACATGTTCCAGAGCTATATCAACAACCTTAGGTGGCAGCTGGAGACTCTGAGCCAGGAGAAGCTG  
AAGCTGGAGGTGGAGCTTGGCAACATGCAGGGGCTGGTGGAGGACTTCAAGAACAAATATGAGGATGAGATCAAT  
AAGCGTACAGAGGTGGAGAATGAATTTGTCCTCATCAAGAAGGATGTGGATGAAGCTTACATGAACAAGATAGAG  
CTGGAGTCTTGCTGGAAGGGCTGACTGACGAGATGGACTTCCTCAGGCAGCTGTTTGAAGAGGAGATCTGGGAG  
CTGCAGTCCCACATCTCGGACATATCTGTGGTGCTGTCCATGGACAACAGCTACTTCCTGGACACGGTCAGCATC  
ATTGCTGAGGTCAAGGAGGAGATTGCCAACCGCAGCCAGGCGGAGGCTGAGAGCATGCACCAGATCAAGTATGAG  
GAGCTGCAGACGCTGGCTGGGAAGCTTGGGCATGACCTGCAGCCTATAAAGACTGAGATCTCCGAGATGAACTGG  
AACATCAGCCGGCTCCAGGCTGAGATTAAGGGCCTCAAAGGCCAGATGGCTTCCCTGGAGGCCACCATCGCAGAT  
GTGGAGCAGCGTGGGGAGCTGGCCGTTAAGGATGCCAACGCCAAGCTGTCCGAGCTGGAGGCCTCTCTGCAATGG  
GCCAGGCAGGATATGGTGTGGCAGCTGCGTGAGTACCAGGAGCTGATGAATGTCAAGCTGGCCTTGGGCATCAAA  
ACTGCCACCTACAGGAAGCTGCTGGAGGGTGAGGAGAGCCGGCTGGAGTCTGGGATGCAGAACATGACAATCCAT  
ACGAAGACCACCAGCGGCTATGCAGGTGGTCTGAGCTCCACCTATGGGGACCTCACAAGCCCCGGCCTCAGCTAC  
AGCCTGGGCTCCAGCTTTGGCTCTGGCGCAGGCTCCAGCTCCTTCAGCCGCACCGGCTCCACCAGGGCTGTGGTT  
GAAGAAGATTTGA

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**FIGURE 4235**

MSIRVTQKSYKMSTSGPRAFSSCSYTSSTHPKKEQIKALNNKFASFIDKVWFLEQQNKMLETKWSLLQQQKMARN  
NKNMFQSYINNLRWQLETLSQEKLELVELGNMQGLVEDFKNKYEDEINKRTEVENEFVLIKKDVDEAYMNKIE  
LESCLEGLTDEMDFLRQLFEEIWEIQSHISDISVVLSDNSYFLDTVSIIAEVKEEIANRSQAEAESMHQIKYE  
ELQTLAGKLGHDLQPIKTEISEMNWNISRLQAEIKGLKGQMASLEATIADVEQRGELAVKDANAKLSELEASLQW  
ARQDMVWQLREYQELMNVKLALGIKTATYRKLLGEESRLESGMQNMTIHTKTTSGYAGGLSSTYGDLTSPGLSY  
SLGSSFGSGAGSSSFSRTGSTRAVVEED



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**FIGURE 4236**

GCAGTACATTGAGCTCCACAGAGACAGCGCCAGGGCAAGTGAGAGCCGGACGGGCACTGGGCGACTCTGTGCCTC  
GCTGAGGAAAAATAACTAAACATGGGCAAAGGAGATCCTAAGAAGCTGAGAGGCAAAATGTCATCATATGCATTT  
TTTGTGCAAACGTCGGGAGGAGCATAAGAAGAAGCACCCAGATGCTTCAGTCAACTTCTCAAGAGTTTTCTAAGA  
AGTGCCCATATGAAAGAGAAATGAAAACCTACATCCCTCCCAAAGGGGAGACAAAAAGAAGTTCAAGGATCCC  
AATGCACCCAAGAGGCCCTCCTTCGGCCTTCTTCCTCTTCTGCTCTGAGTATCGCCCAAAAATCAAAGGAGAACAT  
CCTGGCCTGTCCATTGGTGATGTTGCGAAGAACTGGGAGAGATGTGGAATAACACTGCTGCAGATGACAAGCAG  
CCTTATGAAAAGAAGGCTGCGAAGCTGAAGGAAAAATACGAAAAGGATATTGCTGCATATCGAGCTAAAGGAAAG  
CCTGATGCAGCAAAAAAGGGAGTTGTCAAGGCTGAAAAAGCAAGAAAAAGAAGGAAGAGGAGGAAGATGAGGAA  
GATGAAGAGGATGAGGAGGAGGAGGAAGATGAAGAAGATGAAGATGAAGAAGAAGATGATGATGATGAATAAGTT  
GGTTCTAGCGCAGTTTTTTTTTCTTGTCTATAAAGCATTAAACCCCTGTACACAACCTCACTCCTTTTAAAGAA  
AAAAACTGAAATGTAAGGCTGTGTAAGATTTGTTTTTAACTGTACAGTGTCTTTTTTTGTATAGTTAACACACT  
ACCGAATGTGTCTTTAGATAGCCCTGTCTGGTGGTATTTTCAATAGCCACTAACCTTGCTGGTACAGTATGGG  
GGTTGTAAATTGGCATGGAAATTTAAAGCAGGTTCTTGTGGTGCACAGCACAAATTAGTTATATATGGGGATGG  
TAGTTTTTTTATCTTTCAGTTGTCTCTGATGCAGCTTATACGAAATAATTGTTGTTCTGTTAACTGAATACCACTC  
TGTAATTGCAAAAAAAAAAAAAAGTTGCAGCTGTTTTGTTGACATTCTGAATGCTTCTAAGTAAATACAATTT  
TTTTATTAGTATTGTTGTCTTTTCATAGGTCTGAAATTTTTCTTCTTGAGGGGAAGCTAGTCTTTTGCTTTTGC  
CCATTTTGAATCACATGAATTATTACAGTGTTTATCCTTTCATATAGTTAGCTAATAAAAAGCTTTTGTCTACCC  
ACCTGTCATATCATAATGAGGGTAAAGTTAAGTTGAGATAGTTTTCATCCATAACTGAACATCCAAAATCTTGAT  
CAGTTAAGAAATTTACATAGCCCACTTACATTTACAACTGAAGAGTAATCAATCTACTCAAAGCATGGGATTA  
CTAGAATCAAACATTTTGAAAGTCTGTCTTGAAGGACTAATAGAAAAGTATGTTCTAACCTTTACATGAGGACT  
CTATTCTTTAACTCCCATTAACATGTAATGGCAGTTATATTTTGCAGTCCACATTAAAGAAGACCTGAGAATG  
TATCCCCAAAAGCGTGAGCTTAAATACAAGACTGCCATATTAAATTTTTTGTGACATTAGTCTCAGTGAAGAC  
TATGAAAATGCTGGCTATAGATGCTTTTCCCATTTATCTAAATATGGACTGCTCAGGAAACGAGACTTTCCATT  
ACAAGTATTTTAAATTAATTGGGCCAGCTTTTCAAACAAAGATGCCACATTCAAAATAGGGTATATTTTCTATA  
TTACGGTTTGCCCTTTATAAATCCAAGTAGATAGGAGGAAAGAAGACACTTAACTTTGCATCTCAGTATGAAT  
TATTCAATTTATTGAATGATTTTCTTTACAAAACAACTCATCATTAGTCATGTTTATCTGCTTAGCAGTTTA  
GGGAACAATTTGGCAATTTTGTGGTTTTTCGAGATTATCGTTTTCTTAAAGTGCCAGTATTTTAAATAGCGTTCT  
TATAATTTTACACGCTTTTGTGATGGAGTGCTGTTTTGTTATATAATTTTGACTTGATTCTTTCCATTTGCATT  
TGTTTATGTAATTCAGGAGGAATACTGAACATCTGAGTCTGGATGATACTAATAAACTAATAATTGCAGAGGT  
TT

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**FIGURE 4237**

TTACAGGAAAAAGGCTCTTGCTATGAAAGTTAATCCATAAAATTACAAAAATGACTGTTTTGGCAGTACATTGAG  
CTCCACAGAGACAGCGCCAGGGCAAGTGAGAGCCGGACGGGCACTGGGCGACTCTGTGCCTCGCTGAGGAAAAAT  
AACTAAACATGGGCAAAGGAGATCCTAAGAAGCTGAGAGGCCAAATGTCATCATATGCATTTTTTGTGCAAACGT  
CGGGAGGAGCATAAGAAGAAGCACCCAGATGCTTCAGTCAACTTCTCAAGAGTTTTCTAAGAAGTGCTCAGAGAG  
GTGGAAGACCATTTCTGCTAAAGACAAAGGAAAATTTCAAGATATGGCAAAGGTGGACAAGGCCCATTTATGAAAG  
AGAAATGAAAACCTACATCCCTCCCAAAGGGGAGACAAAAAGAAGTTCAAGGATCCCAATGCACCCAAGAGGCC  
TCCTTCGGCCTTTCTTCTCTTCTGCTCTGAGTATCGCCCCAAAATCAAAGGAGAACATCCTGGCCTGTCCATTGG  
TGATGTTGCGAAGAACTGGGAGAGATGTGGAATAACACTGCTGCAGATGACAAGCAGCCTTATGAAAAGAAGGC  
TGCGAAGCTGAAGGAAAAATACGAAAAGGATATTGCTGCATATCGAGCTAAAGGAAAGCCTGATGCAGCAAAAAA  
GGGAGTTGTCAAGGCTGAAAAAGCAAGAAAAAGAAGGAAGAGGAGGAAGATGAGGAAGATGAAGAGGATGAGGA  
GGAGGAGGAAGATGAAGAAGATGAAGATGAAGAAGAAGATGATGATGATGAATAAGTTGGTTCTAGCGCAGTTTT  
TTTTCTTGCTATATAAGCATTTAACCCCCCTGTACACAACCTCACTCCTTTTAAAGAAAAAACTGAAATGTAAG  
GCTGTGTAAGATTTGTTTTTAACTGTACAGTGTCTTTTTTTGTATAGTTAACACACTACCGAATGTGTCTTTAG  
ATAGCCCTGTCCTGGTGGTATTTTCAATAGCCACTAACCTTGCTTGGTACAGTATGGGGTTGTAAATTGGCATG  
GAAATTTAAAGCAGGTCTTGTTGGTGCACAGCACAAATTAGTTATATATGGGGATGGTAGTTTTTTCATCTTCA  
GTTGTCTCTGATGCAGCTTATACGAAATAATTGTTGTTCTGTAACTGAATACCACTCTGTAATTGCAAAAAAAA  
AAAAAAAAGTTGCAGCTGTTTTGTTGACATTCTGAATGCTTCTAAGTAAATACAATTTTTTTATTA

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**FIGURE 4238**

MLQSTSQEFSKKCSERWKTISAKDKGKFQDMAKVDKAHYEREMKTYIPPKGETKKKFKDPNAPKRPPSAFFLFCS  
EYRPKIKGEHPGLSIGDVAKKLGEMWNNTAADDKQPYEKKAACLKEKYEKDIAAYRAKGKPDAAKGVVKAESK  
KKKEEEEEDEEDESDF

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**FIGURE 4239**

AGGTAATCTGTGAAAATGGTTCGCTATTCACTTGACCCGGAGAACCCACGAAATCAGGCAAATCAAGAGGTTC  
AATCTTCGTGTTCACITTTAAGAACACTCGTGAACTGCTCAGGCCATCAAGGGTATGCATATACGAAAAGCCACG  
AAGTATCTGAAAGATGTCACITTTACAGAAACAGTGTGTACCATTCCGACATTACAACGGTGGAGTTGGCAGGTGT  
GCGCAGGCCAAGCAGTGGGGCTGGACACAAGGTCGGTGGCCAAAAAGAGTGCTGAATTCTTGCTGCACATGCTT  
AAAAACGCAGAGAGTAATGCTGAACTTAAGGGTTTAGATGTAGATTCTCTGGTCATTGAGCATATCCAAGTGAAC  
AAAGCACCTAAGATGCACCGCCGGACCTACAGAGCTCATGGTCGGATTAACCCATACATGAGCTCTCCCTGCCAC  
ATTGAGATGATCCTTACGGAAAAGGAACAGATTGTTCTAAACCAGAAGAGGAGTTGCCCAGAAGAAAAAGATA  
TCCCAGAAGAACTGAAGAAACAAAACTTATGGCACGGGAGTAAATTCAGCATTAAATAAATGTAATTAAAAG  
G

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**FIGURE 4240**

MVRYSLDPENPTKSGKSRGSNLRVHFKNTRETAQAIGMHIRKATKYLKDVTLQKQCVPFRRHYNGGVGRCAQAKQ  
WGWTQGRWPKKSAEFLHMLKNAESNAELKGLDVDSLVEHIOVNKAPKMHRRTYRAHGRINPYMSSPCHIEMIL  
TEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

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**FIGURE 4241**

GAATCAAAGTTCCTCTTGGGGAAATGGCAAGTCTTTAGGACAGGCGAGACCCTGTATGAATAGTACCAAAGCATT  
ACTGCATGGTAGAGAACACACTCAATTAAAAATGTTAAGCTATCTGAAAAATAAAATGTGCAAGTCTTCAGGATG  
GCACAAAACAAAGGTTAATGCTTCTTGGGGCACATTTCTTAGAGGGCTTGCTGAGTGTGTAAATATAATCGACTT  
TTGTTTGTGTTACATGACTTCTGTGACTTCACTGAAAATCTGCACAATTCAGTTTCAGCTCTGGATTACTTCAGT  
TGACCTTTGTGAAGGTTTTTATCTGTGTAGAATGGGTGTTTGACTTGTTTTAGCCTATTACGTTTTTATTTTCTT  
TCACTCTGTATTAAAAGTAAACCTTACTAAAAGAAAAGAGGTTTGTGTTACATTAAATGGTTTTGGATTGGCTT  
TTTTTAGTGAGGCTTTCTGAACATTGAGATATCCTGAACCTTAGAGCTCTTCAATCCTAAGATTTTCATGAAAAGC  
CTCTCACTTGAACCCAAACCAGAGTACTCTTACTGCCTCTTTCTAAATGTTTCAGGAAAAGCATCGTCAGTTTCAG  
TCTTTTCAGAATGAGGGAGAAACATTTGCCTGCCTTGTAAATAACAAGACTCAGCGCTTATTTTTTAAACTGCAT  
TTTAAAAATTGGATAGTATAATAACAATAAGGAGTAAGCCACCTTTTATAGGCACCCTGTAGTTTTATAGTTCTT  
AATCCAAACATTTTATATTTCTTTTGGAAAAACCTACATGCTACAAGCCACCATATGCACAGACTATACA  
GTGAGTTGAGTTGCCTCTCCACAGTCTTTGAGGCGAATTACAAAAGTCCAGCCATTATCATCTTCCTGAGTTAT  
TATTTTGAAATGATTTTTTTGTACATTTTGGCTGCAGTATTGGTGGTAGAATATACTATAATATGGATCATCTCT  
ACTTCTGTATTTATTTATTTATTACTAGACCTCAACCACAGTCTTCTTTTCCCTTCCACTGCTTCTTTTCC  
CCTTCCACCTCTCTTTGCCTGTAAGATGTACTGTATGTAGTCATGCACCTTTGTATTAATATATTAGAAATCTACA  
GATCTGTTTTGTACTTTTTATACTGTTGGATACCTATAATCAAACTTTTACTAGGGTATTGAATAAATCTAGTC  
TTATTAGAAAATAAAAAATAAAAAATAAAAAATAAAAAA

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## FIGURE 4242

GGCTGAGGCAGTGGCTCCTTGACAGCAGCTGCACGCGCCGTGGCTCCGGATCTTCTTCGTCTTTGCAGCGTAGC  
CCGAGTCGGTCAGCGCCAGAGGACCTCAGCAGCCATGTCGAAGCCCCATAGTGAAGCCGGGACTGCCTTCATTCA  
GACCCAGCAGCTGCACGCAGCCATGGCTGACACATTCTGGAGCACATGTGCCGCTGGACATTGATTACACCAC  
CATCAGACCCCGAAGCACTGGCATCATCTGTACCATTGGCCAGCTTCCCGATCAGTGGAGACGTTGAAGGAGAT  
GATTAAGTCTGGAATGAATGTGGCTCGTCTGAACTTCTCTCATGGAACATCATGAGTACCATGCGGAGACCATCAA  
GAATGTGCGCACAGCCACGGAAGCTTTGCTTCTGACCCCATCTCTACCGGCCCGTTGCTGTGGCTCTAGACAC  
TAAAGGACCTGAGATCCGAAGTGGGCTCATCAAGGGCAGCGGCACTGCAGAGGTGGAGCTGAAGAAGGGAGCCAC  
TCTCAAATCACGCTGGATAACGCCTACATGGAAGTGTGACGAGAACATCTGTGGCTGGACTACAAGAACAT  
CTGCAAGGTGGTGGAAAGTGGGCAGCAAGATCTACGTGGATGATGGGCTTATTTCTCTCCAGGTGAAGCAGAAAGG  
TGCCGACTTCTTGGTGACGAGGTGGAAAATGGTGGCTCCTTGGGCAGCAAGAAGGGTGTGAACCTTCCTGGGGC  
TGCTGTGGACTTGCCGTGCTGTGTGCGAGAAGGACATCCAGGATCTGAAGTTTGGGGTCGAGCAGGATGTTGATAT  
GGTGTTCGCTCATTCATCCGAAGGCATCTGATGTCCATGAAGTTAGGAAGGTCCTGGGAGAGAAGGGAAAGAA  
CATCAAGATTATCAGCAAAATCGAGAATCATGAGGGGGTTCGGAGGTTTGATGAAATCCTGGAGGCCAGTGATG  
GATCATGTTGGCTCGTGGTGATCTAGGCATTGAGATTCTGTCAGAGAAGGTCCTTCTGCTCAGAAGATGATGAT  
TGGACGGTGCAACCGAGCTGGGAAGCCTGTCTGTGCTACTCAGATGCTGGAGAGCATGATCAAGAAGCCCG  
CCCCACTCGGGCTGAAGGCAGTGATGTGGCCATGCAGTCTGGATGGAGCCGACTGCATCATGCTGTCTGGAGA  
AACAGCCAAAGGGGACTATCCTCTGGAGGCTGTGCGCATGCAGAACCTGATTGCCCGTGAGGCAGAGGCTGCCAT  
CTACCACTTGCAATTATTTGAGGAACTCCGCCGCTGGCGCCCATACCAGCGACCCACAGAAGCCACCGCCGT  
GGGTGCCGTGGAGGCCTCCTTCAAGTGCTGCAGTGGGGCCATAATCGTCCTCACCAGTCTGGCAGGTCGTCTCA  
CCAGGTGGCCAGATACCGCCACGCTGCCCCATCATTGCTGTGACCCGGAATCCCAGACAGCTCGTCAGGCCCA  
CCTGTACCGTGGCATCTTCCCTGTGCTGTGCAAGGACCCAGTCCAGGAGGCTGGGCTGAGGACGTGGACCTCCG  
GGTGAACCTTTGCCATGAATGTTGGCAAGGCCGAGGCTTCTTCAAGAAGGGAGATGTGGTCATTGTGCTGACCGG  
ATGGCGCCCTGGCTCCGGCTTCACCAACACCATGCGTGTGTTCTGTGCCGTGATGGACCCAGAGCCCTCCT  
CCAGCCCTGTCCACCCCTTCCCCAGCCCATCCATTAGGCCAGCAACGCTTGTAGAACTCACTCTGGGCTGT  
AACGTGGCACTGGTAGGTTGGGACACCAGGGAAGAAGATCAACGCCCTACTGAAACATGGCTGTGTTGCAGCCT  
GCTCTAGTGGGACAGCCAGAGCCTGGCTGCCCCATCATGTGGCCCCACCCAAATCAAGGGAAGAAGGAGGAATGC  
TGGACTGGAGGCCCTGGAGCCAGATGGCAAGAGGGTGACAGCTTCTTCTGTGTGTACTCTGTCCAGTTCTCT  
TTAGAAAAATGGATGCCCAGAGGACTCCCAACCCTGGCTTGGGGTCAAGAAACAGCCAGCAAGAGTTAGGGGCC  
TTAGGGCACTGGGCTGTTGTTCCATTGAAGCCGACTCTGGCCCTGGCCCTTACTTGCTTCTCTAGCTCTCTAGGC  
CTCTCCAGTTTGACCTGTCCCCACCCTCCACTCAGTGTCTGTCAGCAAACACTCCACCCTCCACCTTCCATTT  
TCCCCACTACTGCAGCACCTCCAGGCTGTTGCCG

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**FIGURE 4243**

MSKPHSEAGTAFIQ TQQLHAAMADTFLEHMCRLDIDSPITARNTGI ICTIGPASRSVETLKEMIKSGMNVARLN  
FSHGTHEYHAETIKNVRTATESFASDPILYRPVAVALDTKGPEIRTGLIKSGTAEVELKKGATLKITLDNAYME  
KCDENILWLDYKNICKVVEVGSKIYVDDGLISLQVKQKGADFLVTEVENGGSLGSKKGVNLPGAAVDLPAVSEKD  
IQDLKFGVEQDVDMVFASFIRKASDVHEVRKVLGEKGKNIKII SKIENHEGVRRFDEILEASDGIMVARGDLGIE  
IPA EKVFLAQMMIGRCNRAGKPVICATQMLESMIKKPRPTRAE GSDVANAVLDGADCIMLSGETAKGDYPLEAV  
RMQNLIAREAEAAIYHLQLFEELRRLAPITSDPTEATAVGAVEASF KCCSGAIIVLTKSGRSAHQVARYRPRAPI  
IAVTRNPQTARQAHLYRGIFPVLCKDPVQEAWAEDVDLRVNFAMNVGKARGFFKKGDVVIVLTGWRPGSGFTNTM  
RVVPVP



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**FIGURE 4244**

CCTCCGAGAGGGGAGACCAGCGGGCCATGACAAGCTCCAGGCTTTGGTTTTGCTGCTGCTGGCGGCAGCGTTTCG  
CAGGACGGGCGACGGCCCTCTGGCCCTGGCCCTCAGAACTTCCAAACCTCCGACCAGCGCTACGTCTTTACCCGA  
ACAACTTTCAATTCCAGTACGATGTCAGCTCGGCCGCGCAGCCCGGCTGCTCAGTCCTCGACGAGGCCTTCCAGC  
GCTATCGTGACCTGCTTTTCGGTTCCGGGTCTTGGCCCCGTCCTTACCTCACAGGGAACGGCATACTGGAGA  
AGAATGTGTTGGTTGTCTCTGTAGTCACACCTGGATGTAACCAGCTTCCTACTTTGGAGTCAGTGGAGAATTATA  
CCCTGACCATAAATGATGACCAGTGTTTACTCCTCTCTGAGACTGTCTGGGGAGCTCTCCGAGGTCTGGAGACTT  
TTAGCCAGCTTGTTTGGAAATCTGCTGAGGGCACATTCTTTATCAACAAGACTGAGATTGAGGACTTTCCCGCT  
TTCCTCACCGGGGCTTGCTGTTGGATACATCTCGCCATTACCTGCCACTCTCTAGCATCCTGGACACTCTGGATG  
TCATGGCGTACAATAAATTGAACGTGTTCCACTGGCATCTGGTAGATGATCCTTCCCTCCCATATGAGAGCTTCA  
CTTTTCCAGAGCTCATGAGAAAGGGGTCTACAACCTGTACCCACATCTACACAGCACAGGATGTGAAGGAGG  
TCATTGAATACGCACGGCTCCGGGGTATCCGTGTGCTTGACAGTGTGACACTCCTGGCCACACTTTGTCTTG  
GACCAGTATCCCTGGATTACTGACTCCTTGCTACTCTGGGTCTGAGCCCTCTGGCACCTTTGGACCAGTGAATC  
CCAGTCTCAATAATACCTATGAGTTTATGAGCACATTCTTCTTAGAAGTCAGCTCTGTCTTCCAGATTTTATC  
TTCATCTTGAGGAGATGAGTTGATTTTACCTGCTGGAAGTCCAACCCAGAGATCCAGGACTTTATGAGGAAGA  
AAGGCTTCGGTGAGGACTTCAAGCAGCTGGAGTCTTCTACATCCAGACGCTGCTGGACATCGTCTCTTATG  
GCAAGGGCTATGTGGTGTGGCAGGAGGTGTTTGATAATAAAGTAAAGATTAGCCAGACACAATCATACAGGTGT  
GGCGAGAGGATATTCCAGTGAACGTATATGAAGGAGCTGGAACGGTCACCAAGGCCGGCTTCCGGGCCCTTCTCT  
CTGCCCCCTGGTACCTGAACCGTATATCCTATGGCCCTGACTGGAAGGATTTCTACATAGTGAACCCCTGGCAT  
TTGAAGGTACCCCTGAGCAGAAGGCTCTGGTGATTGGTGAGAGGCTTGATGTGGGGAGAATATGTGGACAACA  
CAAACCTGGTCCCCAGGCTCTGGCCCAGAGCAGGGGCTGTGCGGAAAGGCTGTGGAGCAACAAGTTGACATCTG  
ACCTGACATTTGCCTATGAACGTTTGTACACTTCCGCTGTGAATTGCTGAGGCGAGGTGTCCAGGCCCAACCCC  
TCAATGTAGGCTTCTGTGAGCAGGAGTTTGAACAGACCTGAGCCCCAGGCACCGAGGAGGGTGCTGGCTGTAGGT  
GAATGGTAGTGAGGCCAGGCTTCCACTGCATCCTGGCCAGGGGACGGAGCCCCCTTGCCTTCGTGCCCTTGCTG  
CGTGCCCCCTGTGCTTGGAGAGAAAGGGGCCGGTGTGCGCTCGCATTCAATAAAGAGTAATGTGGCATTITTTCT  
ATAATAACATGGATTACCTGTGTTTAAAAAAGTGTGAATGGCGTTAGGGTAAGGGCACAGCCAGGCTGGA  
GTCAGTGTCTGCCCTGAGGTCTTTTAAAGTTGAGGGCTGGGAATGAAACCTATAGCCTTTGTGCTGTTCTGCCTT  
GCCTGTGAGCTATGTCACTCCCTCCCACTCCTGACCATAATTCCAGACACCTGCCCTAATCCTCAGCCTGCTCAC  
TTCATTCTGCATTATATCTCCAAGGCGTTGGTATATGAAAAAGATGTAGGGGCTTGGAGGTGTTCTGGACAGT  
GGGGAGGGCTCCAGACCCAACCTGGTCACAGAAGAGCCTCTCCCCATGCATACTCATCCACCTCCCTCCCTAG  
AGCTATTCTCCTTTGGGTTTCTTGCTGCTTCAATTTTATACAACCATTATTTAAATATTATTAAACACATATTGT  
TCTCT

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**FIGURE 4245**

CCCTGAGCAGAAGGCTCTGGTGATTGGTGGAGAGGCTTGTATGTGGGGAGAATATGTGGACAACACAAACCTGGT  
CCCCAGGCTCTGGTAAGGGTTTTTCGGGGGGGAGGTGGAGGGTTGGGCCTGAGAGCAGGAGTTCTCCCTTAGAGAC  
CCAATCCCATCTAGCCACCTCTGGACTAGTACCCTTCTTTCAGGCCTGAGAGAGAGCAGGCCGTGCAACGAGCCT  
TCTGAAGATTGTGTGCAATATTCACTCTCCACATGACTTCCGTCATATCCCTCCAGCTGCCCTTTGGTATGTG  
GGATAGGGATTGTAAACCTTACTTCCCAGAGAGATAATGAGGCCTGGAGAACATAGGTGAGTTGCTCAAGACCCA  
GCACAAGCATCCATGATTCTGTAAATAAGGCTTCCCTCTGCTGTTTTCACTGCAGCCTTACCAAGTATGGTTGGG  
TGTGCAAAGTTTACATTTTAAGGACCTCTGCTGCTGCCACTGTCATTGTGGTTAATGATGGCTTTAAGGTTTATT  
CTTATTCCCATACTTTGAGAGAGGAAGAGAGTGGGATTGCTACCCACATTTTAATGAAGGTGGAGCTGAGCCGT  
AGAACTCTCTGGGAGCCATCCAACCTGGCTGTGGCTCATAACAAGGTATTGATCACTTCCTTTGGCCTGAGTGAG  
TCCAGGGTGCCTAGACAAGAGGTAGCAGCCTGTGGATGTCCAGCACCTTTCAGGGAATACAGGGCCCAATCTGG  
CACATGCCCCTTTTCTCCAGGCCAGAGCAGGGGCTGTTGCCGAAAGGCTGTGGAGCAACAAGTTGACATCTGA  
CCTGACATTTGCCTATGAACGTTTGTCACTTCCGCTGTGAATTGCTGAGGTAAGCAAGCTGTGGGGCCTTCGC  
AAGGCGGAGCAGGCCAGATCCAGGGCTGGGGAACCCCTTAGAGAGAGGAAGACAATAATTAACAATAGCTAACAC  
TTACAGAGGCTTATAGTCAGCCCTCATCCACGGATTCAACCAACTGCGATAAAAAGTATTACAGGAAAAAAAAAAT  
ACAACAAAAAATGGTACAAATAAAAAATACTGTATAACAACCT

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**FIGURE 4246**

CCAGAAAGGGGCAGGCTGAGGCTGGGGGAGGGGCTCAAGGGAGCCCAGCTGGGAGGGCCCAGGCAGGCAGTGCGG  
AGCTGGCCGTGGGCTGCCTACCCCTTTCATCTCTGCAACTCCTTCCTCCCTGGGCCTCCCTTCTGGAGAAGGGCCA  
GAGAAATGTCGTCCCAGCCAGCAGGGAACCAGACCTCCCCCGGGGCCACAGAGGACTACTCCTATGGCAGCTGGTA  
CATCGATGAGCCCCAGGGGGGCGAGGAGCTCCAGCCAGAGGGGGAAGTGCCCTCCTGCCACACCAGCATACCACC  
CGGCCTGTACCACGCCTGCCTGGCCTCGCTGTCAATCCTTGTGCTGCTGCTCCTGGCCATGCTGGTGAGGCGCCG  
CCAGCTCTGGCCTGACTGTGTGCGTGGCAGGCCCGGCCTGCCAGCCCTGTGGATTTCTTGGCTGGGGACAGGCC  
CCGGGCAGTGCCCTGCTGCTGTTTTTCATGGTCCCTCCTGAGCTCCCTGTGTTTGTGCTGCCCGACGAGGACGCATT  
GCCCTTCCTGACTCTCGCCTCAGCACCCAGCCAAGATGGGAAAAGTGGGCTCCAAGAGGGGGCTGGAAGATACT  
GGGACTGTTCTATTATGCTGCCCTCTACTACCCCTCTGGCTGCCTGTGCCACGGCTGGCCACACAGCTGCACACCT  
GCTCGGCAGCAGCTGTCTGGGCCCCACCTTGGGGTCCAGGTCTGGCAGAGGGCAGAGTGTCCCCAGGTGCCCAA  
GATCTACAAGTACTACTCCCTGCTGGCCTCCCTGCCTCTCCTGCTGGGCCTCGGATTCTGAGCCTTTGGTACCC  
TGTGACAGCTGGTGAGAAGCTTCAGCCGTAGGACAGGAGCAGGCTCCAAGGGGCTGCAGAGCAGTACTCTGAGGA  
ATATCTGAGGAACCTCCTTTGCAGGAAGAAGCTGGGAAGCAGCTACCACACCTCCAAGCATGGCTTCCTGTCTGT  
GGCCCCGCGTCTGCTTGAGACACTGCATCTACACTCCACAGCCAGGATTCCATCTCCCGCTGAAGCTGGTGCTTTC  
AGCTACACTGACAGGGACGGCCATTTACCAGGTGGCCCTGTGCTGCTGGTGGGCGTGGTACCCACTATCCAGAA  
GGTGAGGGCAGGGGTACCCACGGATGTCTCTACCTGCTGGCCAGCTTTGGAATCGTGCTCTCCGAGGACAAGCA  
GGAGGTGGTGAGCTGGTGAAGCACCATCTGTGGGCTCTGGAAGTGTGCTACATCTCAGCCTTGGTCTTGTCTGT  
CTTACTCACCTTCCTGGTCTGTATGCGCTCACTGGTGACACACAGGACCAACCTTCGAGCTCTGCACCGAGGAGC  
TGCCCTGGACTTGAGTCCCTTGCATCGGAGTCCCCATCCCTCCCGCCAAGCCATATTCTGTTGGATGAGCTTCAG  
TGCCTACCAGACAGCCTTTATCTGCCTTGGGCTCCTGGTGCAGCAGATCATCTTCTTCTTGGGAACCACGGCCCT  
GGCCTTCCTGGTGCTCATGCTGTGCTCCATGGCAGGAACCTCCTGCTCTTCCGTTCCCTGGAGTCTCTGCTGGCC  
CTTCTGGCTGACTTTGGCCCTGGCTGTGATCCTGCAGAACATGGCAGCCCATTTGGGTCTTCTGGAGACTCATGA  
TGGACACCCACAGCTGACCAACCGGCGAGTGCTCTATGCAGCCACCTTTCTTCTTCTTCCCCCTCAATGTGCTGGT  
GGGTGCCATGGTGGCCACCTGGCGAGTGCTCCTCTCTGCCCTCTACAACGCCATCCACCTTGGCCAGATGGACCT  
CAGCCTGCTGCCACCGAGAGCCGCACTCTCGACCCCGGCTACTACACGTACCGAACTTCTTGAAGATTGAAGT  
CAGCCAGTCGCATCCAGCCATGACAGCCTTCTGCTCCCTGCTCCTGCAAGCGCAGAGCCTCCTACCCAGGACCAT  
GGCAGCCCCCAGGACAGCCTCAGACCAGGGGAGGAAGACGAAGGGATGCAGCTGCTACAGACAAAGGACTCCAT  
GGCCAAGGGAGCTAGGCCCGGGGCCAGCCGCGGCAGGGCTCGCTGGGGTCTGGCCTACACGCTGCTGCACAACCC  
AACCCTGCAGGTCTTCCGCAAGACGGCCCTGTTGGGTGCCAATGGTGCCAGCCCTGAGGGCAGGGAAGGTCAAC  
CCACCTGCCCATCTGTGCTGAGGCATGTTCTGCTACCATCCTCCTCCCTCCCGGCTCTCCTCCAGCATCAC  
ACCAGCCATGCAGCCAGCAGGTCTCCTCCGATCACTGTGGTTGGGTGGAGGTCTGTCTGCACTGGGAGCCTCAGGA  
GGGCTCTGCTCCACCCACTTGGCTATGGGAGAGCCAGCAGGGGTTCTGGAGAAAAAACTGGTGGGTTAGGGCCT  
TGGTCCAGGAGCCAGTTGAGCCAGGGCAGCCACATCCAGGCGTCTCCCTACCCTGGCTCTGCCATCAGCCTTGAA  
GGGCCTCGATGAAGCCTTCTCTGGAACCACTCCAGCCCAGCTCCACCTCAGCCTTGGCCTTACGCTGTGGAAGC  
AGCCAAGGCACTTCTCACCCTCAGCGCCACGGACCTCTCTGGGGAGTGGCCGAAAGCTCCCGGGCCTCTGG  
CCTGCAGGGCAGCCCAAGTCATGACTCAGACCAGGTCCCACACTGAGCTGCCACACTCGAGAGCCAGATATTTT  
TGTAAGTTTTATGCCTTTGGCTATTATGAAAGAGGTAGTGTGTTCCCTGCAATAAACTTGTTCTTGAGAAAAAA  
AA

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**FIGURE 4247**

MSSQPAGNQTSPGATEDYSYGSWYIDEPQGGEELQPEGEVPSCHTSIPPGLYHACLASLSILVLLLLAMLVRRRQ  
LWPDVCVRGRPLPSPVDFLAGDRPRAVPAAVFMVLLSSLCLLLPDEDALPFLTLASAPSQDGKTEAPRGAWKILG  
LFYYAALYYPLAACATAGHTAAHLLGSTLSWAHLGVQVWQRAECPQVPKIYKYSSLASLPLLLGLGFLSLWYPV  
QLVRSFSRRTGAGSKGLQSSYSEEYLRNLLCRKKLGSSYHTSKHGFLSWARVCLRHCIYTPQPGFHLPLKLVLSA  
TLTGTAIYQVALLLLVGVPVTIQKVRAGVTTDVSYLLASFGIVLSEDKQEVVELVKHHLWALEVCYISALVLSCL  
LTFVLMRSLVTHRTNLRALHRGAALDLSPLHRSPHPSRQAIFCWMSFSAYQTAFICLGLLVQQIIFFLGTTALA  
FLVLMFVLHGRNLLLFRSLESSWPFWLTALAVILQNMAAHWVFLETHDGHQPQLTNRRVLYAATFLLFPLNVLVG  
AMVATWRVLLSALYNAILHLGQMDLSLLPPRAATLDPGYYTYRNFLEKIEVSQSHPAMTAFCSLLLQAQSLLPRTMA  
APQDSLPRGEEDEGMQLLQTKDSMAKGARPGASRGRARWGLAYTLLHNPTLQVFRKTALLGANGAQP

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**FIGURE 4248**

GGCACGAGGGGGCGCTGGGGCCCTGGGCAGCGCGGGCTCGATGTGTGTGTCAGCCAAGTAGCTGGTCCCCTGGAGCG  
GTGAGGTCGCCACCGGATAGTGTTCCTGCCCCATTACTAGCGATCTGTGACCTTGGGCCAGTGATTTTACTGAGT  
CTTGCTTCCCTCATCTTTAAATGTGGCTAATGCCTGCCTTAGGGAACCGTTGTGAGGATTAAGTGAGACATGGT  
ATATAAACGACCTCCTTCTGGCATAAACTTGAGGTGGAAGATACCTTGAGGATGCTTGAAGGTCTGCTAGGCAG  
CTTCACAGCCTTTTCTTCTCTCTATCAGAGGTCTCTTTGGAAGCAATAATGATGACTATAACAAGAAGT  
ATCTTGCTTTTGCAAGATTCTTCCGCCGTCAGAGTTTCTGATTTATTTTCTGGGGTTCCATGTATGCCAGGGAGAA  
AGAGAGAGCGCGAAAGAGAGAGAGGATGCTCTCTCAGACTGGCACCTGGCGGTGAAGCTGGCTGACCAGCCACTTA  
CTCCAAAGTCTATTCTTCGGTTGCCAGAGACAGAACTGGGAGAATACTCGCTAGGGGGCTATAGTATTTTCATTTT  
TGAAGCAGCTTATTGCTGGCAAACCTCCAGGAGTCTGTTCCAGACCTGAGCTGATTGATCTGATCTACTGTGGTC  
GGAAGCTAAAAGATGACCAGACACTTGACTTCTATGGCATTCAACCTGGGTCCACTGTCCATGTTCTGCGAAAGT  
CCTGGCCTGAACCTGATCAGAAACCGGAACCTGTGGACAAAGTGGCTGCCATGAGAGAGTTCCGGGTGTTGCACA  
CTGCCCTGCACAGCAGCTCCTCTTACAGGGAGGCGGTCTTTAAGATGCTCAGCAATAAGGAGTCTCTGGATCAGA  
TCATTGTGGCCACCCAGGCCTCAGCAGTGACCTATTGCTCTTGGGGTTCTCCAGGACAAGGACCTCTTCTCTG  
TCTTCGCTGATCCCAATATGCTTGATACGTTGGTGCTGCTCACCCAGCCCTCGTCAATGCCATTGTCTCGGTTT  
TGCACTCCGTAGCAGGAGTGCCCAATGCCTGGGACTGACTCCTCTTCCCGGAGCATGCCCTCCAGCTCATACC  
GGGATATGCCAGGTGGCTTCTGTTTGAAGGGCTCTCAGATGATGAGGATGACTTTCACCCAAACACCAGGTCCA  
CACCTCTAGCAGTACTCCAGCTCCCGCCAGCCTCCCTGGGGTACAGTGGAGCTGCTGGGCCCCGGCCCATCA  
CCCAGAGTGAGCTGGCCACCGCCTTGGCCCTGGCCAGCACTCCGGAGAGCAGCTCTCACACACCGACTCCTGGCA  
CCCAGGGTCATTCTCAGGGACCTCACCAATGTCCTCTGGTGTCAGTCAGGGACGCCCCATCACCAATGATCTCT  
TCAGCCAAGCCCTACAGCATGCCCTTCAGGCCTCTGGGCAGCCAGCCTTCAGAGCCAGTGGCAGCCCCAGCTGC  
AGCAGCTACGTGACATGGGCATCCAGGACGATGAGCTGAGCCTGCGGGCCCTGCAGGCCACCGGTGGGGACATCC  
AAGCAGCCCTGGAGCTCATCTTGTGAGGAGCCCCATGCACTCCCTGCTTCCCCTGAACCCCCAGCAAGTTGC  
AGAGGCTACTGCCCTTGGGAGGCACTCATGAAGGTGCCATCTCTCCCTTCCCAATATACCTGATGGTCAAC  
TCTCAA

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**FIGURE 4249**

MSLSDWHLAVKLADQPLTPKSILRLPETELGEYSLGGYSISFLKQLIAGKLQESVPDPELIDLIYCGRKLKDDQT  
LDFYGIQPGSTVHVLKRSWPEPDQKPEPVDKVAAMREFRVLHTALHSSSSYREAVFKMLSNKESLDQIIVATPGL  
SSDPIALGVLQDKDLFSVFADPNMLDTLVPAPALVNAIVLVLSVAGSAPMPGTDSSSRSMPSSTYRDMFGGFL  
FEGLSDDDDDFHPNTRSTPSSSTPSSRPASLGYSAGAPRPITQSELATALALASTPSSSHTPTPGTQGHSSGT  
SPMSSGVQSGTPTINDLFSQALQHALQASGQPSLQSOWQPQLQQLRDMGIQDDELSLRALQATGGDIQAALILIF  
AGGAP

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**FIGURE 4250**

GGCGGGACGCGCACGCTCACAGTGAGGTCTCAAAAGATCCCCACCTCAGTTTTCTCATCTGGAAAGTGGGGCCTC  
GTAATCCTGTCCGACCCGGCGCGGGACAGTAGGTGTCAGGGATTTTGGTGACCCACGCTCGAGGCCTCTGCAAA  
AGGGGGCTGTCCAGTGGCCAGAGACGCAGCCGGCGGGGCTTTTGTCTAGCGGGGAGTCTTAAGTGAAGGCCA  
CGCAGGCCGGCAGGAAGCCGCTCCACAGGAGGGGGCTCAAGGAGAGGGGATCTCCTCCCTCCAGACTCCGGCCCC  
GCCAGAGTAGCTCTAGGGTATCTTCCCAGAACTGCCCCGCACGCACTGGCGAGCTGGGAGCGCCACCACGGCTT  
TCAAAAAACCCGCACACACCAAGATAATAATGTGTCGTTTCGCTCGTTTCGCGCAAGCGGAGTCGCGTCCGCCTTC  
CCGAGCTCCGGCACACAGACCTCAGGCCGCTCTCGCGCTCTCCGGGGCCCCGAGAACAATGCCCGTCTCTCCGC  
GCGCAGGAGGGAGTTGGCGGACCACGCGGGGTGCGGGCGACGGAGCGGGGCCAGCCCCACGGCCAGGTCGGGGCC  
CCACCTCTCGGCTCTGAGAGCCCAGCCGGCCCCGGGCCGCGCACCTGTCAGGTGCGGGGACCTACGTGCGCCGCGA  
CACGGCGGGAGGCGGGCCGGGCCAGGCTCGTCCCCCTCGGCCCTCCCGGAACTAGTCTCCTAGGCCGCGGCGCCCG  
CCGGAGCGGAGAGGGCTGGTGCCCCGGAGCCTTCGAGTCGGGGGCTAGAGCGGCCAGGCCTCCGAGCCGGGTGGA  
GCCGAGGCTGGCGACGGCTCGGTACGCGAGGGGGCGGGGCTGCCACGGGCGGAGGTGCGAGCCGGAAGCGGAAG  
AGGCGCTCGGAGCGGGGAGTGGGGCCTAGCTGCAGCCGGAGCCTGGGAGACGCCATGACCGCCTGCCCTACCAGA  
GGAGGTACCGGGAGCGCCGTGACAGCGATACATACCGGTGTGAAGAGCGGAGCCCATCCTTTGGAGAGGACTACT  
ATGGACCTTCACGTTCTCGTCATCGTCGGCGATCGCGGGAGAGGGGGCCATACCGGACCCGCAAGCATGCCACC  
ACTGCCACAAACGCCGCACCAGGTCTTGTAAGCAGCGCTCTCGAGAAGCCAACAGAGCAGTAAGCGCAGCAGCC  
GGAGTGTGGAAGATGACAAGGAGGGTCACCTGGTGTGCCGATCGGCGATTGGCTCCAAGAGCGATATGAGATTG  
TGGGAACCTGGGTGAAGGCACCTTTGGCAAGGTGGTGGAGTGCTTGGACCATGCCAG